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PROPOSED MERGER
YOUR VOTE IS VERY IMPORTANT

To the Stockholders of Organovo Holdings, Inc. and Tarveda Therapeutics, Inc.:

Organovo Holdings, Inc. ("Organovo") and Tarveda Therapeutics, Inc. ("Tarveda") have entered into an Agreement and Plan of Merger and Reorganization, dated as of December 13, 2019, as amended by the First Amendment to Merger Agreement (the "Amendment to Merger Agreement"), dated January 26, 2020, and as may be amended from time to time (the "Merger Agreement"), pursuant to which a wholly owned subsidiary of Organovo will merge with and into Tarveda, with Tarveda surviving as a wholly owned subsidiary of Organovo (the "Merger"). Organovo and Tarveda believe that the Merger will result in a clinical stage biopharmaceutical company discovering and developing a new class of potent and selective precision oncology medicines for the treatment of patients with a wide range of solid tumor malignancies.

At the effective time of the Merger (the "Effective Time"), each share of Tarveda common stock outstanding immediately prior to the Effective Time (excluding certain shares of Tarveda common stock that may be cancelled pursuant to the Merger Agreement and shares held by stockholders who have exercised and perfected appraisal rights or dissenters' rights as more fully described in the section titled "*The Merger — Appraisal Rights and Dissenters' Rights*" in this proxy statement/prospectus/information statement) will be converted into the right to receive a number of shares of Organovo common stock. The final exchange ratio (the "Exchange Ratio") will be determined pursuant to a formula described in more detail in the Merger Agreement and in this proxy statement/prospectus/information statement. Immediately after the consummation of the Merger, based solely on the estimated Exchange Ratio as described in this proxy statement/prospectus/information statement, Tarveda securityholders would own approximately 75% of the Organovo common stock on a fully diluted basis as defined in the Merger Agreement, and Organovo securityholders would own approximately 25% of the Organovo common stock on a fully diluted basis as defined in the Merger Agreement, subject to adjustment of the Exchange Ratio as set forth in the Merger Agreement.

Shares of Organovo common stock are currently listed on The Nasdaq Capital Market under the symbol "ONVO." After completion of the Merger, Organovo will be renamed "Tarveda Therapeutics, Inc." and is expected to trade on The Nasdaq Capital Market under the symbol "TVDA". On February 21, 2020, the last trading day before the date of this proxy statement/prospectus/information statement, the closing sale price of Organovo common stock was $0.35 per share.

Organovo is holding a special meeting of stockholders in order to obtain the stockholder approvals necessary to complete the Merger and related matters. At the Organovo special meeting, which will be held at 10:00 a.m., Pacific Time, on March 26, 2020 at the offices of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, 3570 Carmel Mountain Road, Suite 200, San Diego, California 92130, unless postponed or adjourned to a later date, Organovo will ask its stockholders to:

1. approve the issuance of shares of Organovo common stock in the Merger to the Tarveda securityholders in accordance with the terms of the Merger Agreement;
2. approve an amendment to the Organovo certificate of incorporation effecting a reverse stock split of Organovo common stock, at a ratio of one (1) new share for every 20 to 40 shares of outstanding Organovo common stock (the "Organovo Reverse Stock Split");
3. approve, on a non-binding advisory vote basis, compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger, each as described in the accompanying proxy statement/prospectus/information statement;
4 approve the adoption of the Combined Organization 2020 Equity Incentive Plan (the "2020 Plan");
5. authorize the adjournment of the Organovo special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Organovo Proposal Nos. 1, 2, 3, and 4; and

6. transact such other business as may properly come before the Organovo special meeting or any adjournment or postponement thereof.

Tarveda stockholders are being asked to approve the Merger Agreement, and vote in favor of any other matter necessary to consummate the transactions contemplated by the Merger Agreement.

As described in the accompanying proxy statement/prospectus/information statement, certain Tarveda stockholders, including certain directors and executive officers of Tarveda, and 5% or greater stockholders, who in the aggregate own approximately 95% of the outstanding shares of Tarveda common stock on an as-converted to common stock basis are parties to support agreements with Organovo and Tarveda. Following the registration statement on Form S-4, of which this proxy statement/prospectus/information statement is a part, being declared effective by the U.S. Securities and Exchange Commission and pursuant to the conditions of the Merger Agreement, the Tarveda stockholders who are party to the support agreements have each agreed to execute an action by written consent of the Tarveda stockholders, referred to as the written consent, (a) in favor of (i) adoption of the Merger Agreement and approval of the transactions contemplated by the Merger Agreement, (ii) approval of any proposal to adjourn or postpone a meeting of the holders of Tarveda capital stock to a later date, if there are not sufficient votes for the adoption of the Merger Agreement and the transactions contemplated thereby on the date such meeting is held, and (iii) any other matter necessary to consummate the transactions contemplated by the Merger Agreement that are considered and voted upon by Tarveda stockholders and (b) against any "acquisition proposal," as defined in the Merger Agreement. Therefore, absent termination of the Merger Agreement, holders of a sufficient number of shares of Tarveda capital stock required to adopt the Merger Agreement have agreed to adopt the Merger Agreement, and no meeting of Tarveda stockholders to adopt the Merger Agreement and approve the Merger will be held. Nevertheless, all Tarveda stockholders will have the opportunity to elect to adopt the Merger Agreement, thereby approving the Merger and related transactions, by signing and returning to Tarveda a written consent.

After careful consideration, the Organovo and Tarveda boards of directors have approved the Merger Agreement and the Merger and the respective proposals referred to above, and each of the Organovo and Tarveda boards of directors has determined that it is advisable to enter into the Merger Agreement and related transactions. The Organovo board of directors recommends that its stockholders vote "FOR" the proposals described in the accompanying proxy statement/prospectus/information statement, and the board of directors of Tarveda recommends that its stockholders sign and return the written consent indicating their approval of the Merger and adoption of the Merger Agreement and related transactions to Tarveda described in the accompanying proxy statement/prospectus/information statement.

More information about Organovo, Tarveda and the proposed transaction is contained in this proxy statement/prospectus/information statement. Organovo and Tarveda urge you to read the accompanying proxy statement/prospectus/information statement, including the documents incorporated by reference herein, carefully and in its entirety. IN PARTICULAR, YOU SHOULD CAREFULLY CONSIDER THE MATTERS DISCUSSED UNDER "***RISK FACTORS***" BEGINNING ON PAGE 30.

Organovo and Tarveda are excited about the opportunities the Merger brings to both Organovo and Tarveda stockholders, and thank you for your consideration and continued support.

Taylor Crouch
Chief Executive Officer
Organovo Holdings, Inc.

Andrew J. Fromkin
Chief Executive Officer
Tarveda Therapeutics, Inc.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this proxy statement/prospectus/information statement. Any representation to the contrary is a criminal offense.

The accompanying proxy statement/prospectus/information statement is dated February 24, 2020, and is first being mailed to Organovo and Tarveda stockholders on or about February 26, 2020.

ORGANOVO HOLDINGS, INC.

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS
TO BE HELD ON MARCH 26, 2020

Dear Stockholders of Organovo:

On behalf of the board of directors of Organovo Holdings, Inc., a Delaware corporation ("Organovo"), we are pleased to deliver this proxy statement/prospectus/information statement for the proposed Merger between Organovo and Tarveda Therapeutics, Inc., a Delaware corporation ("Tarveda"), pursuant to which Opal Merger Sub, Inc., a wholly owned subsidiary of Organovo ("Merger Sub"), will merge with and into Tarveda, with Tarveda surviving as a wholly owned subsidiary of Organovo (the "Merger"). The special meeting of stockholders of Organovo will be held on March 26, 2020 at 10:00 a.m., Pacific Time, at the offices of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, 3570 Carmel Mountain Road, Suite 200, San Diego, California 92130, for the following purposes:

1. To consider and vote upon a proposal to approve the issuance of Organovo common stock in the Merger in accordance with the terms of the Agreement and Plan of Merger and Reorganization, dated as of December 13, 2019, as amended by the First Amendment to Merger Agreement, dated January 26, 2020, by and among Organovo, Merger Sub and Tarveda, a copy of which is attached as *Annex A* to the accompanying proxy statement/prospectus/information statement (the "Merger Agreement") and the resulting change of control of Organovo resulting from the Merger.
2. To approve the amendment to the certificate of incorporation of Organovo to effect a reverse stock split of Organovo common stock, at a ratio of one (1) new share for every 20 to 40 shares of outstanding Organovo common stock, with the exact ratio and effective time of the reverse stock split of Organovo common stock to be determined by the Organovo board of directors and agreed upon by Tarveda and publicly announced by press release (the "Organovo Reverse Stock Split"), in the form attached as *Annex D* to the accompanying proxy statement/prospectus/information statement.
3. To consider and vote upon a proposal to approve, on a non-binding advisory vote basis, compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger.
4. To consider and vote upon a proposal to approve the Combined Organization 2020 Equity Incentive Plan (the "2020 Plan") attached as *Annex E* to the accompanying proxy statement/prospectus/information statement.
5. To consider and vote upon an adjournment of the Organovo special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Organovo Proposal Nos. 1, 2, 3 and 4.
6. To transact such other business as may properly come before the Organovo special meeting or any adjournment or postponement thereof.

The Organovo board of directors has fixed February 14, 2020 as the record date for the determination of stockholders entitled to notice of, and to vote at, the Organovo special meeting and any adjournment or postponement thereof. Only holders of record of shares of Organovo common stock at the close of business on the record date are entitled to notice of, and to vote at, the Organovo special meeting. At the close of business on the record date, Organovo had 130,497,563 shares of common stock outstanding and entitled to vote.

Your vote is important. The affirmative vote of a majority of the voting power of the votes cast at the Organovo special meeting, whether present in person or represented by proxy at the Organovo special meeting, is required for approval of Organovo Proposal Nos. 1, 3, 4 and 5. The affirmative vote of the holders of a majority of shares of Organovo common stock having voting power outstanding on the record

date for the Organovo special meeting is required for approval of Organovo Proposal No. 2. Proposal No. 1 is conditioned upon Proposal No. 2. Therefore, the Merger cannot be consummated without the approval of Proposal Nos. 1 and 2.

Even if you plan to attend the Organovo special meeting in person, Organovo requests that you sign and return the enclosed proxy to ensure that your shares will be represented at the Organovo special meeting if you are unable to attend.

By Order of the Organovo Board of Directors,

Taylor Crouch
Chief Executive Officer
Solana Beach, California
February 24, 2020

THE ORGANOVO BOARD OF DIRECTORS HAS DETERMINED AND BELIEVES THAT EACH OF THE PROPOSALS OUTLINED ABOVE IS ADVISABLE TO, AND IN THE BEST INTERESTS OF, ORGANOVO AND ITS STOCKHOLDERS AND HAS APPROVED EACH SUCH PROPOSAL. THE ORGANOVO BOARD OF DIRECTORS RECOMMENDS THAT ORGANOVO STOCKHOLDERS VOTE "FOR" EACH SUCH PROPOSAL.

REFERENCES TO ADDITIONAL INFORMATION

This proxy statement/prospectus/information statement incorporates important business and financial information about Organovo that is not included in or delivered with this document. You may obtain this information without charge through the SEC's website (http://www.sec.gov) or upon your written or oral request by contacting the Secretary of Organovo Holdings, Inc., 440 Stevens Avenue, Suite 200, Solana Beach, California 92075 or by calling (858) 224-1000.

To ensure timely delivery of these documents, any request should be made no later than March 16, 2020 to receive them before the Organovo special meeting.

For additional details about where you can find information about Organovo, please see the sections entitled "*Where You Can Find More Information*" and "*Incorporation of Certain Documents By Reference*" in this proxy statement/prospectus/information statement.

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QUESTIONS AND ANSWERS ABOUT THE MERGER

Except where specifically noted, the following information and all other information contained in this proxy statement/prospectus/information statement or incorporated by reference herein does not give effect to the proposed reverse stock split at a ratio of one (1) new share for every 20 to 40 shares of outstanding Organovo common stock described in Organovo Proposal No. 2 (the "Organovo Reverse Stock Split") in this proxy statement/prospectus/information statement. If the Merger and the Organovo Reverse Stock Split are approved, the Organovo Reverse Stock Split will be effected immediately prior to the closing of the Merger (the "Closing").

The following section provides answers to frequently asked questions about the Merger (as defined below). This section, however, provides only summary information. For a more complete response to these questions and for additional information, please refer to the cross-referenced sections.

Q: What is the Merger?

A: Organovo Holdings, Inc. ("Organovo") and Tarveda Therapeutics, Inc. ("Tarveda") have entered into an Agreement and Plan of Merger and Reorganization dated as of December 13, 2019, as amended by the First Amendment to Merger Agreement, dated January 26, 2020, and as may be amended from time to time (the "Merger Agreement"). The Merger Agreement contains the terms and conditions of the proposed business combination of Organovo and Tarveda. Under the Merger Agreement, Opal Merger Sub, Inc., a wholly-owned subsidiary of Organovo (the "Merger Sub") will merge with and into Tarveda, with Tarveda surviving as a wholly-owned subsidiary of Organovo (the "Merger").

At the effective time of the Merger (the "Effective Time"), the shares of Tarveda common stock outstanding immediately prior to the Effective Time (excluding certain shares of Tarveda common stock that may be cancelled pursuant to the Merger Agreement and shares held by stockholders who have exercised and perfected appraisal rights or dissenters' rights as more fully described in "*The Merger — Appraisal Rights and Dissenters' Rights*" below) will be converted into the right to receive an estimated aggregate 432.0 million shares of Organovo common stock, without taking into account the proposed Organovo Reverse Stock Split but including shares of Organovo common stock reserved for issuance upon exercise of Tarveda options and warrants assumed in the Merger, to be implemented prior to the consummation of the Merger and which is the subject of Proposal No. 2. The estimated exchange ratio contained herein (the "Exchange Ratio") is based upon Organovo's and Tarveda's capitalization immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted based on the amount of Organovo net cash, Organovo and Tarveda debt and changes in the capitalization of Organovo and Tarveda prior to the consummation of the Merger. As a result of the Merger, holders of Tarveda stock, options and warrants are expected to own in the aggregate approximately 75% of Organovo and the Organovo stockholders, optionholders, holders of restricted stock units ("RSUs") and warrantholders are expected to own in the aggregate approximately 25% of Organovo on a fully-diluted basis as defined in the Merger Agreement and subject to adjustment as described herein. Simultaneously with the completion of the Merger, Organovo will change its corporate name to "Tarveda Therapeutics, Inc." as required by the Merger Agreement.

Q: What will happen to Organovo if, for any reason, the Merger does not close?

A: If, for any reason, the Merger does not close and the Merger Agreement is terminated, the Organovo board of directors may elect to, among other things, attempt to complete another strategic transaction including a transaction similar to the Merger, continue to operate the business of Organovo or to dissolve and liquidate the assets of Organovo, and may still elect to implement the Organovo Reverse Stock Split. If Organovo decides to dissolve and liquidate its assets, Organovo would be required to pay all of its debts and contractual obligations, and to set aside certain reserves for potential future claims. As of December 31, 2019, Organovo had cash and cash equivalents totaling approximately $30.5 million. However, there can be no assurances as to the amount or timing of available cash, if any, left to distribute to stockholders after paying the debts and other obligations of Organovo and setting aside funds for potential future claims.

Q: Why are the two companies proposing to merge?

A: Tarveda and Organovo believe that the Merger will result in a clinical stage biopharmaceutical company discovering and developing a new class of potent and selective precision oncology medicines for the treatment of patients with a wide range of solid tumor malignancies. For a discussion of Organovo and Tarveda reasons for the Merger, please see the sections titled "*The Merger — Organovo Reasons for the Merger*" and "*The Merger — Tarveda Reasons for the Merger*" in this proxy statement/prospectus/information statement.

Q: Why am I receiving this proxy statement/prospectus/information statement?

A: You are receiving this proxy statement/prospectus/information statement because you have been identified as a stockholder of Organovo or Tarveda as of the applicable record date, and you are entitled, as applicable, to (i) vote at the Organovo special meeting of stockholders to approve the issuance of shares of Organovo common stock in the Merger in accordance with the terms of the Merger Agreement, the proposed Organovo Reverse Stock Split, the approval on a non-binding, advisory basis of the compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger, approve the 2020 Plan and to approve the adjournment of the special meeting, if necessary, to solicit additional proxies or (ii) sign and return the Tarveda written consent to approve the Merger and adopt the Merger Agreement and related transactions. This document serves as:

- a proxy statement of Organovo used to solicit proxies for its special meeting;
- a prospectus of Organovo used to offer shares of Organovo common stock in exchange for shares of Tarveda common stock in the Merger and issuable upon exercise of Tarveda warrants and options being assumed by Organovo in the Merger, as applicable; and
- an information statement of Tarveda used to solicit the written consent of its stockholders for the approval of the Merger and the adoption of the Merger Agreement and related transactions.

Q: What is required to consummate the Merger?

A: To consummate the Merger, Organovo stockholders must approve the issuance of shares of Organovo common stock in the Merger in accordance with the terms of the Merger Agreement and the amendment to the certificate of incorporation of Organovo effecting the Organovo Reverse Stock Split, and Tarveda stockholders must approve the Merger and adopt the Merger Agreement and related transactions.

The approval by the stockholders of the issuance of Organovo common stock in the Merger in accordance with the terms of the Merger Agreement requires the affirmative vote of a majority of the voting power of the votes cast at the Organovo special meeting. The approval of the Organovo Reverse Stock Split requires the affirmative vote of the holders of a majority of the outstanding shares of Organovo common stock having voting power on the record date for the Organovo special meeting. The approval of the Organovo Reverse Stock Split is required in order to authorize Organovo's issuance of the shares of its common stock pursuant to the Merger Agreement and/or to avoid a delisting of Organovo common stock from The Nasdaq Stock Market. Therefore, if the requisite stockholders of Organovo approve the issuance of Organovo common stock in the Merger to the Tarveda securityholders in accordance with the terms of the Merger Agreement but do not approve the Organovo Reverse Stock Split, the Merger will not be consummated.

The approval of the Merger and the adoption of the Merger Agreement and related transactions by the stockholders of Tarveda requires the affirmative vote of the holders of at least a majority of the outstanding shares of Tarveda's Series 1 redeemable convertible preferred stock (the "Series 1 Preferred Stock") and the holders of at least a majority of the outstanding capital stock of Tarveda (voting on an as-converted-to-common stock basis). In addition to the requirement of obtaining such stockholder approvals and appropriate regulatory approvals, each of the other closing conditions set forth in the Merger Agreement must be satisfied or waived.

Certain Tarveda stockholders, including certain directors and executive officers of Tarveda and 5% or greater stockholders, who in the aggregate own approximately 95% of the outstanding shares of Tarveda common stock on an as-converted to common stock basis, and certain Organovo stockholders, including certain directors and executive officers, of Organovo who in the aggregate own approximately less than 1% of the outstanding shares of Organovo common stock, are parties to support agreements with Organovo and Tarveda. The Organovo stockholders who are party to such support agreements have agreed to vote (a) in favor of (i) the Organovo Stockholder Proposals and (ii) any other matter necessary to consummate the transactions contemplated by the Merger Agreement, and (b) against any "acquisition proposal," as defined in the Merger Agreement. Following the registration statement on Form S-4, of which this proxy statement/prospectus/information statement is a part, being declared effective by the U.S. Securities and Exchange Commission and pursuant to the conditions of the Merger Agreement, the Tarveda stockholders who are party to the support agreements have each agreed to execute an action by written consent of the Tarveda stockholders, referred to as the written consent, (a) in favor of (i) adoption of the Merger Agreement and approval of the transactions contemplated by the Merger Agreement, (ii) approval of any proposal to adjourn or postpone a meeting of the holders of Tarveda capital stock to a later date, if there are not sufficient votes for the adoption of the Merger Agreement and the transactions contemplated thereby on the date such meeting is held, and (iii) any other matter necessary to consummate the transactions contemplated by the Merger Agreement that are considered and voted upon by Tarveda stockholders and (b) against any "acquisition proposal," as defined in the Merger Agreement. Therefore, holders of a sufficient number of shares of Tarveda capital stock required to adopt the Merger Agreement, thereby approving the Merger, have agreed to adopt the Merger Agreement via written consent. Stockholders of Tarveda, including those who are parties to support agreements, will be requested to execute written consents providing such approvals.

For a more complete description of the closing conditions under the Merger Agreement, Organovo and Tarveda urge you to read the section titled "*The Merger Agreement — Conditions to the Completion of the Merger*" in this proxy statement/prospectus/information statement.

Q: What will Tarveda stockholders, warrantholders and optionholders receive in the Merger?

A: As a result of the Merger, Tarveda stockholders, warrantholders and optionholders will become entitled to receive shares of Organovo common stock equal to approximately 75% of the outstanding common stock of Organovo on a fully diluted basis as defined in the Merger Agreement, subject to adjustment based upon whether Organovo's net cash at the Closing increases or decreases, Organovo's and Tarveda's debt at the Closing and changes in the capitalization of Organovo and Tarveda prior to the Closing. At the Effective Time of the Merger, outstanding and unexercised Tarveda warrants and options will be assumed by Organovo and converted into warrants and options to purchase Organovo common stock, as applicable, with the number of shares and exercise price being appropriately adjusted to reflect the final Exchange Ratio as determined in accordance with the Merger Agreement.

For a more complete description of what Tarveda stockholders, warrantholders and optionholders will receive in the Merger, please see the sections titled "*Market Price and Dividend Information*" and "*The Merger Agreement — Merger Consideration*" in this proxy statement/prospectus/information statement.

Q: Who will be the directors of Organovo following the Merger?

A: Following the Merger, the board of directors of Organovo will be as follows:

Name	Current Principal Affiliation
Andrew J. Fromkin	Tarveda President, Chief Executive Officer and Chairman
Dennis Ausiello, M.D.	Tarveda Director
Nilesh Kumar, Ph.D.	Tarveda Director
Guido Magni, M.D., Ph.D.	Tarveda Director
Michael Metzger	Tarveda Director
Aymeric Sallin, M.S.	Tarveda Director
Carolyn Beaver	Organovo Director
Mark Kessel	Organovo Director

Q: Who will be the executive officers of Organovo immediately following the Merger?

A: Immediately following the Merger, the executive management team of Organovo is expected to be composed solely of the members of the Tarveda executive management team prior to the Merger as set forth below:

Name	Position(s)
Andrew J. Fromkin	President, Chief Executive Officer and Chairman
Jeffrey D. Bloss, M.D.	Chief Medical Officer
Brian K. Roberts	Chief Financial Officer, Treasurer and Secretary
Mark T. Bilodeau, Ph.D.	Chief Scientific Officer
Sudhakar Kadiyala, Ph.D.	Executive Vice President, Strategy

Q: What are the material U.S. federal income tax consequences of the Merger to Tarveda stockholders?

A: Each of Organovo and Tarveda intends the Merger to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the "Code"). It is a condition to Organovo's obligation to complete the Merger that Organovo receive a written opinion of its counsel, Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP ("Gunderson Dettmer") (or if Gunderson Dettmer is unable to issue such an opinion, of another nationally recognized law firm proposed by Tarveda that is reasonably acceptable to Organovo ("Organovo's Replacement Counsel")), to the effect that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. It is a condition to Tarveda's obligation to complete the Merger that Tarveda receive an opinion of its counsel, Cooley LLP ("Cooley") (or if Cooley is unable to issue such an opinion, of another nationally recognized law firm proposed by Organovo that is reasonably acceptable to Tarveda ("Tarveda's Replacement Counsel")), to the effect that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. In general and subject to the qualifications and limitations set forth in the section titled "*The Merger — Certain Material U. S. Federal Income Tax Consequences of the Merger*" if the Merger qualifies as a "reorganization" within the meaning of Section 368(a) of the Code, the material tax consequences to U.S. Holders (as defined in the section titled "*The Merger — Certain Material U.S. Federal Income Tax Consequences of the Merger*") of Tarveda common stock should be as follows:

- a Tarveda stockholder generally will not recognize gain or loss upon the exchange of Tarveda common stock for Organovo common stock pursuant to the Merger, except to the extent of cash received in lieu of a fractional share of Organovo common stock as described below;
- a Tarveda stockholder who receives cash in lieu of a fractional share of Organovo common stock in the Merger generally will recognize capital gain or loss in an amount equal to the difference between the amount of cash received instead of a fractional share and the stockholder's tax basis allocable to such fractional share;

- a Tarveda stockholder's aggregate tax basis for the shares of Organovo common stock received in the Merger (including any fractional share interest for which cash is received) generally will equal the stockholder's aggregate tax basis in the shares of Tarveda common stock surrendered in the Merger; and
- the holding period of the shares of Organovo common stock received by a Tarveda stockholder in the Merger generally will include the holding period of the shares of Tarveda common stock surrendered in exchange therefor.

Tax matters are very complicated, and the tax consequences of the Merger to a particular Tarveda stockholder will depend on such stockholder's circumstances. Accordingly, each Tarveda stockholder is strongly urged to consult with his, her or its tax advisor for a full understanding of the tax consequences of the Merger to that stockholder, including the applicability and effect of federal, state, local and non-U.S. income and other tax laws. For more information, please see the section titled "*The Merger — Certain Material U.S. Federal Income Tax Consequences of the Merger*" in this proxy statement/prospectus/information statement.

Q: Do persons involved in the Merger have interests that may conflict with mine as an Organovo stockholder?

A: Yes. In considering the recommendation of the Organovo special committee with respect to issuing shares of Organovo common stock pursuant to the Merger Agreement and the other matters to be acted upon by Organovo stockholders at the Organovo special meeting, Organovo stockholders should be aware that certain members of the Organovo board of directors and executive officers of Organovo have interests in the Merger that may be different from, or in addition to, interests they have as Organovo stockholders.

For example, Organovo is party to Severance and Change in Control Plan Participation Agreements with each of its executive officers pursuant to Organovo's Severance and Change in Control Plan (the "Organovo Severance Plan") approved by Organovo's compensation committee. The Organovo Severance Plan establishes the amount of severance payments and benefits available in the event of a (i) termination of employment by Organovo for reasons other than cause, death or disability or by the participant for good reason and (ii) termination of employment by Organovo for reasons other than cause, death or disability or by the participant for good reason within six months before or within 12 months after a change in control. Organovo's executive officers, including Taylor Crouch, Organovo's Chief Executive Officer, who also serves on Organovo's board of directors, Craig Kussman, Organovo's Chief Financial Officer and Jennifer Bush, Organovo's general counsel and corporate secretary, are each parties to a participation agreement under the Organovo Severance Plan and are contractually entitled to severance payments, including a cash severance payment equal to a multiple of each person's base salary (2.0 times the base salary for Messrs. Crouch and Kussman and 1.0 times the base salary for Ms. Bush) paid in a lump sum, plus a target bonus for the fiscal year in which the termination occurs, health benefit continuation (up to 18 months for Messrs. Crouch and Kussman, and 12 months for Ms. Bush), and outplacement assistance. In addition, Organovo's executive officers are also entitled to full accelerated vesting of all outstanding equity grants and a one-year time period to exercise any stock options or stock appreciation rights.

Based on the terms of their respective participation agreements, Organovo's current executive officers will be entitled to receive a total value of approximately $3.06 million (collectively, not individually) in connection with the consummation of the Merger and the associated termination of their employment from Organovo, not including the value associated with the acceleration of their outstanding equity awards. Such compensation is the subject of Proposal No. 3.

Additionally, pursuant to the terms of the Merger Agreement, Carolyn Beaver and Mark Kessel, who are currently directors of Organovo, will continue as directors of the combined organization after the Closing and will be due certain compensation as non-employee directors.

As of December 31, 2019, the directors and executive officers of Organovo owned, in the aggregate, less than 1% of the outstanding voting shares of Organovo common stock. Each of Organovo's officers and

directors have entered into support agreements and lock-up agreements in connection with the Merger. The support agreements and lock-up agreements are discussed in greater detail in the section titled "*Agreements Related to the Merger*" in this proxy statement/prospectus/information statement.

The Organovo board of directors and special committee were aware of these interests and considered them, among other matters, in the decision to approve the Merger Agreement. For more information, please see the section titled "*The Merger — Interests of the Organovo Directors and Executive Officers in the Merger*" in this proxy statement/prospectus/information statement.

Q: Do persons involved in the Merger have interests that may conflict with mine as a Tarveda stockholder?

A: Yes. In considering the recommendation of the board of directors of Tarveda with respect to approving the Merger and related transactions by written consent, Tarveda stockholders should be aware that certain members of the board of directors and executive officers of Tarveda have interests in the Merger that may be different from, or in addition to, interests they have as Tarveda stockholders. All of Tarveda's executive officers and certain of its directors have options, subject to vesting, to purchase shares of Tarveda common stock that will convert into options to purchase a number of shares of Organovo common stock determined by the Exchange Ratio; certain of Tarveda's directors and all its executive officers are expected to become directors and executive officers of Organovo upon the consummation of the Merger; and all of Tarveda's directors and executive officers are entitled to certain indemnification and liability insurance coverage pursuant to the terms of the Merger Agreement. In addition, certain of Tarveda's executive officers and directors and affiliates of Tarveda's directors currently hold shares of Tarveda's common stock and preferred stock. The shares of preferred stock will be converted into shares of Tarveda common stock prior to the consummation of the Merger. The Tarveda board of directors was aware of these interests and considered them, among other matters, in its decision to approve the Merger Agreement. For more information, please see the section titled "*The Merger — Interests of the Tarveda Directors and Executive Officers in the Merger*" of this proxy statement/prospectus/information statement.

Q: As an Organovo stockholder, how does the Organovo board of directors recommend that I vote?

A: After careful consideration, the Organovo board of directors recommends that Organovo stockholders vote:

- "FOR" Proposal No. 1 to approve the issuance of shares of common stock of Organovo in the Merger to the Tarveda securityholders in accordance with the terms of the Merger Agreement;
- "FOR" Proposal No. 2 to approve the amendment to the certificate of incorporation of Organovo to effect the Organovo Reverse Stock Split, at a ratio of one (1) new share for every 20 to 40 shares outstanding;
- "FOR" Proposal No. 3 to consider and vote upon a proposal to approve, on a non-binding advisory vote basis, compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger;
- "FOR" Proposal No. 4 to approve the 2020 Plan; and
- "FOR" Proposal No. 5 to adjourn the special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of Proposal Nos. 1, 2, 3 and 4.

Q: Why am I being asked to cast a non-binding, advisory vote regarding compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger?

A: Securities and Exchange Commission (the "SEC") rules require Organovo to seek a non-binding, advisory vote regarding compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger.

Q: What is the compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger for purposes of this advisory vote?

A: The compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger includes cash severance payments, reimbursement of health coverage costs,
outplacement service benefits and accelerated vesting of outstanding equity awards pursuant to the Organovo Severance and Change in Control Plan as a result of the planned termination of the named executive officers in connection with the consummation of the Merger Organovo's named executive officers will be entitled to receive a total value of approximately $3.06 million (collectively, not individually) in connection with the consummation of the Merger and the associated termination of their employment from Organovo, not including the value associated with the acceleration of their outstanding equity awards. For further detail, see the section titled "*Organovo Proposal No. 3: Advisory, Non-Binding Vote on Merger-Related Executive Compensation Arrangements*" in this proxy statement/prospectus/information statement.

Q: What will happen if stockholders do not approve the compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger at the Organovo special meeting?

A: Approval of the compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger (and their associated termination from Organovo) is not a condition to completion of the Merger. The vote with respect to the compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger is an advisory vote and will not be binding on Organovo. Accordingly, regardless of the outcome of the advisory vote, if the Merger Agreement is adopted by the stockholders and the Merger is completed, Organovo's named executive officers will be eligible to receive the compensation that is based on or otherwise relates to the Merger and their associated termination from Organovo in accordance with the Organovo Severance and Change in Control Plan and participation agreements that each named executive officer has entered into in connection therewith.

Q: Why am I being asked to approve the Organovo Reverse Stock Split?

A: The Organovo board of directors approved the proposal approving the amendment to the Organovo certificate of incorporation effecting the Organovo Reverse Stock Split for the following reasons: the Organovo Reverse Stock Split is required in order to make sufficient shares of Organovo common stock available for issuance to Tarveda stockholders pursuant to the Merger Agreement; the Organovo board of directors believes effecting the Organovo Reverse Stock Split may be an effective means of avoiding a delisting of Organovo common stock from The Nasdaq Stock Market; the Organovo board of directors believes an investment in Organovo common stock may not appeal to brokerage firms that are reluctant to recommend lower priced securities to their clients and investors may also be dissuaded from purchasing lower priced stocks because the brokerage commissions, as a percentage of the total transaction, tend to be higher for such stocks; the analysts at many brokerage firms do not monitor the trading activity or otherwise provide coverage of lower priced stocks; and the Organovo board of directors believes that most investment funds are reluctant to invest in lower priced stocks. If the Proposal No. 1 is not approved at the Organovo special meeting the Organovo board of directors may still elect to effect the Organovo Reverse Stock Split. For further detail, see the section titled *"Organovo Proposal No. 2: Approval of the Amendment to the Certificate of Incorporation of Organovo Effecting the Organovo Reverse Stock Split."*

Q: As a Tarveda stockholder, how does the Tarveda board of directors recommend that I vote?

A: After careful consideration, the Tarveda board of directors recommends that Tarveda stockholders execute the written consent indicating their vote in favor of the approval of the Merger and the adoption of the Merger Agreement and the transactions contemplated thereby.

Q: What risks should I consider in deciding whether to vote in favor of the approval of the issuance of shares of Organovo common stock in the Merger to the Tarveda securityholders in accordance with the terms of the Merger Agreement or to execute and return the written consent, as applicable?

A: You should carefully review the section of this proxy statement/prospectus/information statement, including any information incorporated into such section, titled "*Risk Factors*," which sets forth certain risks and uncertainties related to the Merger, risks and uncertainties to which the combined organization's business will be subject and risks and uncertainties to which each of Organovo and Tarveda, as an independent company, is subject.

Q: What is the quorum requirement?

A: A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if stockholders holding at least a majority in voting power of the shares of Organovo common stock issued and outstanding and entitled to vote at the Organovo special meeting, present in person or represented by proxy, are present at the Organovo special meeting. On February 14, 2020, there were 130,497,563 shares of Organovo common stock issued and outstanding and entitled to vote. Accordingly, holders of at least 65,248,782 shares of Organovo common stock must be present at the Organovo special meeting for a quorum to exist. Your shares of Organovo common stock will be counted toward the quorum at the Organovo special meeting only if you attend the Organovo special meeting in person or are represented at the Organovo special meeting by proxy.

Abstentions and broker non-votes (as described below) will be counted towards the quorum requirement. If there is no quorum, the chair of the meeting or the holders of a majority of shares present and entitled to vote at the meeting in person or represented by proxy may adjourn the Organovo special meeting to another date.

Q: If my Organovo shares are held in "street name" by my broker, will my broker vote my shares for me?

A: If you hold shares beneficially in street name and do not provide your broker or other agent with voting instructions, your shares may constitute "broker non-votes." Broker non-votes occur on a matter when banks, brokers and other nominees are not permitted to vote on certain non-discretionary matters without instructions from the beneficial owner and instructions are not given. These matters are referred to as "non-discretionary" matters. Organovo Proposal Nos. 2 and 5 are discretionary matters and Organovo Proposal Nos. 1, 3 and 4 are non-discretionary matters. As a result, banks, brokers and other nominees will have discretion to vote on Organovo Proposal Nos. 2 and 5, but will not have discretion to vote on Organovo Proposal Nos. 1, 3 and 4.

Broker non-votes will not be considered as votes cast by the holders of Organovo common stock present in person or represented by proxy at the Organovo special meeting, and will therefore not have any effect with respect to Proposal Nos. 1, 3 or 4.

Q: When do you expect the Merger to be consummated?

A: Organovo and Tarveda anticipate that the Merger will occur sometime soon after the Organovo special meeting to be held on March 26, 2020, but cannot predict the exact timing. For more information, please see the section titled "*The Merger Agreement — Conditions to the Completion of the Merger*" in this proxy statement/prospectus/information statement.

Q: What do I need to do now?

A: Organovo and Tarveda urge you to read this proxy statement/prospectus/information statement and the documents incorporated by reference carefully, including its annexes, and to consider how the Merger affects you.

If you are an Organovo stockholder, you may provide your proxy instructions in one of two different ways. First, you can mail your signed proxy card in the enclosed return envelope. You may also provide your proxy instructions via the Internet by following the instructions on your proxy card or voting instruction

form. Please provide your proxy instructions only once, unless you are revoking a previously delivered proxy instruction, and as soon as possible so that your shares can be voted at the special meeting of Organovo stockholders.

If you are a Tarveda stockholder, you may execute and return your written consent to Tarveda in accordance with the instructions provided.

Q: What happens if I do not return a proxy card or otherwise provide proxy instructions, as applicable?

A: Organovo Proposal Nos. 2 and 5 are discretionary matters and Organovo Proposal Nos. 1, 3 and 4 are non-discretionary matters. As a result, banks, brokers and other nominees will have discretion to vote on Organovo Proposal Nos. 2 and 5, but will not have discretion to vote on Organovo Proposal Nos. 1, 3 and 4.

Q: May I vote in person at the special meeting of stockholders of Organovo?

A: If your shares of Organovo common stock are registered directly in your name with the Organovo transfer agent, you are considered to be the stockholder of record with respect to those shares, and the proxy materials and proxy card are being sent directly to you by Organovo. If you are an Organovo stockholder of record, you may attend the Organovo special meeting and vote your shares in person. Even if you plan to attend the Organovo special meeting in person, Organovo requests that you sign and return the enclosed proxy to ensure that your shares will be represented at the Organovo special meeting if you are unable to attend.

If your shares of Organovo common stock are held in a brokerage account or by another nominee, you are considered the beneficial owner of shares held in "street name," and the proxy materials are being forwarded to you by your broker or other nominee together with a voting instruction card. As the beneficial owner, you are also invited to attend the Organovo special meeting. Because a beneficial owner is not the stockholder of record, you may not vote these shares in person at the Organovo special meeting unless you obtain a proxy from the broker, trustee or nominee that holds your shares, giving you the right to vote the shares at the meeting.

Q: When and where is the special meeting of Organovo stockholders?

A: The special meeting of Organovo stockholders will be held at the offices of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, 3570 Carmel Mountain Road, Suite 200, San Diego, California 92130, at 10:00 a.m., Pacific Time, on March 26, 2020. Subject to space availability, all Organovo stockholders as of the record date, or their duly appointed proxies, may attend the meeting. Since seating is limited, admission to the meeting will be on a first-come, first-served basis. Registration and seating will begin at 9:00 a.m., Pacific Time.

Q: May I change my vote after I have submitted a proxy or provided proxy instructions?

A: Organovo stockholders of record, other than those Organovo stockholders who are parties to support agreements, may change their vote at any time before their proxy is voted at the Organovo special meeting in one of three ways. First, a stockholder of record of Organovo can send a written notice to the Secretary of Organovo stating that it would like to revoke its proxy. Second, a stockholder of record of Organovo can submit new proxy instructions either on a new proxy card or via the Internet. Third, a stockholder of record of Organovo can attend the Organovo special meeting and vote in person. Attendance alone will not revoke a proxy. If an Organovo stockholder of record or a stockholder who owns Organovo shares in "street name" has instructed a broker to vote its shares of Organovo common stock, the stockholder must follow directions received from its broker to change those instructions.

Q: Who is paying for this proxy solicitation?

A: Organovo and Tarveda will share equally the cost of printing and filing of this proxy statement/prospectus/information statement and the proxy card. Arrangements will also be made with brokerage firms and other

custodians, nominees and fiduciaries who are record holders of Organovo common stock for the forwarding of solicitation materials to the beneficial owners of Organovo common stock. Organovo will reimburse these brokers, custodians, nominees and fiduciaries for the reasonable out-of-pocket expenses they incur in connection with the forwarding of solicitation materials.

Organovo has engaged D.F. King & Co., Inc. to assist in the solicitation of proxies and provide related advice and informational support, for a services fee and the reimbursement of customary disbursements, which are not expected to exceed $0.2 million in total.

Q: Who can help answer my questions?

A: If you are an Organovo stockholder and would like additional copies, without charge, of this proxy statement/prospectus/information statement or if you have questions about the Merger, including the procedures for voting your shares, you should contact:

Organovo Holdings, Inc.
440 Stevens Avenue, Suite 200
Solana Beach, California 92075
(858) 224-1000
Attn: Secretary
Legal@organovo.com

D.F. King & Co., Inc.
48 Wall Street
New York, NY 10005
Telephone: (800) 431-9646 (toll-free)
(212) 269-5550 (collect)
Email: ONVO@dfking.com

If you are a Tarveda stockholder, and would like additional copies, without charge, of this proxy statement/prospectus/information statement or if you have questions about the Merger, including the procedures for voting your shares, you should contact:

Tarveda Therapeutics, Inc.
134 Coolidge Avenue
Watertown, MA 02472
Tel: (617) 923-4100
Fax: (617) 923-4101
Attn: Secretary
Secretary@tarvedatx.com

Prospectus Summary

This summary highlights selected information from this proxy statement/prospectus/information statement and may not contain all of the information that is important to you. To better understand the Merger, the proposals being considered at the Organovo special meeting and the Tarveda stockholder actions that are the subject of the written consent, you should read this entire proxy statement/prospectus/information statement carefully, including the Merger Agreement attached as Annex A, the opinion of Roth Capital Partners, LLC attached as Annex B and the other annexes to which you are referred herein. In addition, the parties incorporate by reference certain financial information about Organovo into this proxy statement/prospectus/information statement, For more information, please see the sections titled "Where You Can Find More Information" and "Incorporation of Certain Documents By Reference" in this proxy statement/prospectus/information statement.

The Companies

Organovo Holdings, Inc.
440 Stevens Avenue, Suite 200
Solana Beach, CA 92075
(858) 224-1000

Organovo is a biotechnology company that has historically focused on pioneering the development of bioprinted human tissues that emulate human biology and disease. Organovo has been developing its *in vivo* liver tissues to treat end-stage liver disease and a select group of life-threatening, orphan diseases, for which there are limited treatment options other than organ transplantation. Organovo has also been pursuing research of other potential pipeline *in vivo* tissue constructs in-house and through collaborations with academic and government researchers.

In May 2019, Organovo announced plans to conduct additional preclinical studies necessary to optimize its manufacturing processes and complete additional preclinical studies that would generate consistent scientific data regarding the prolonged functionality and therapeutic benefits of its *in vivo* liver tissues.

In August 2019, after a rigorous assessment of its liver therapeutic tissue program following completion of these additional studies, Organovo concluded that the variability of biological performance and related duration of potential benefits no longer supported an attractive opportunity due to redevelopment challenges and lengthening timelines to compile sufficient data to support an Investigational New Drug ("IND") filing. As a result, Organovo suspended development of its lead program and all other related in-house pipeline development activities. The Organovo board of directors also engaged a financial advisory firm to explore its available strategic alternatives, including evaluating a range of ways to generate value from its technology platform and intellectual property, its commercial and development capabilities, its listing on The Nasdaq Stock Market, and its remaining financial assets. These strategic alternatives included possible mergers and business combinations, sales of part or all of Organovo's assets, and licensing and partnering arrangements. Organovo implemented various restructuring steps to manage its resources and extend its cash runway, including reducing commercial activities related to its liver tissues, except for sales of primary human cells out of inventory, negotiating an exit from its long-term facility lease, selling various assets, and reducing its workforce.

Organovo has retained certain key management, employees and consultants, its core intellectual property, licenses, collaborations with research institutions and universities, and proprietary equipment, and will continue its operations and will explore business and strategic options related to its technology platform and intellectual property.

After conducting a diligent and extensive process of evaluating strategic alternatives for Organovo and identifying and reviewing potential candidates for a strategic acquisition or other transaction, which included the

receipt of more than 27 non-binding indications of interest from interested parties and careful evaluation and consideration of those proposals, and following extensive negotiation with Tarveda, on December 13, 2019, Organovo entered into the Merger Agreement with Tarveda. Pursuant to the Merger Agreement, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, at the Effective Time, Merger Sub, a wholly-owned subsidiary of Organovo, will merge with and into Tarveda, with Tarveda continuing as a wholly-owned subsidiary of Organovo and the surviving corporation of the Merger. If the Merger is completed, the business of Organovo will become the business of Tarveda as described beginning on page 194 of this proxy statement/prospectus/information under the caption "*Tarveda Business*."

Tarveda Therapeutics, Inc.
134 Coolidge Ave.
Watertown, MA 02472
(617) 923-4100

Tarveda is a clinical stage biopharmaceutical company developing a new class of potent and selective precision oncology medicines, which it refers to as *Pentarin* miniature drug conjugates, for the treatment of patients with various solid tumor malignancies.

Opal Merger Sub, Inc.

Opal Merger Sub, Inc. is a wholly-owned subsidiary of Organovo, and was formed solely for the purposes of carrying out the Merger.

The Merger (see page 95)

If the Merger is completed, Merger Sub will merge with and into Tarveda, with Tarveda surviving as a wholly-owned subsidiary of Organovo.

At the Effective Time, each share of Tarveda common stock outstanding immediately prior to the Effective Time (excluding certain shares of Tarveda common stock that may be cancelled pursuant to the Merger Agreement and shares held by stockholders who have exercised and perfected appraisal rights or dissenters' rights as more fully described in "*The Merger — Appraisal Rights and Dissenters' Rights*" in this proxy statement/prospectus/information statement) will be converted into the right to receive a number of shares of Organovo common stock. The final Exchange Ratio will be determined pursuant to a formula described in more detail in the Merger Agreement and in this proxy statement/prospectus/information statement. Immediately after the consummation of the Merger, based solely on the estimated Exchange Ratio set forth below, Tarveda securityholders would own approximately 75% of the Organovo common stock on a fully diluted basis as defined in the Merger Agreement, and Organovo securityholders would own approximately 25% of the Organovo common stock on a fully diluted basis as defined in the Merger Agreement, subject to adjustment of the Exchange Ratio as set forth in the Merger Agreement.

Organovo will assume all outstanding and unexercised Tarveda options and warrants to purchase Tarveda common stock, and each such Tarveda options and warrants will be converted into an option or warrant, respectively, to purchase shares of Organovo common stock, with the number of shares of Organovo common stock subject to such option or warrant and the exercise price being appropriately adjusted to reflect the Exchange Ratio. The percentages set forth above assume that the initial estimate of the Exchange Ratio is not changed; however, the Exchange Ratio is subject to change as described in the section titled "*The Merger Agreement — Merger Consideration*" in this proxy statement/prospectus/information statement. The initial estimate of the Exchange Ratio set forth below assumes (i) that Organovo will have $21.3 million in net cash

immediately prior to the Closing, (ii) Organovo outstanding shares, options, warrants and restricted stock units as of the Closing will be equal to 147,159,154 (on a pre-Organovo Reverse Stock Split basis), (iii) Tarveda outstanding shares as of the Closing will be equal to 3,316,215,995 (on a fully-diluted, as-converted basis) and (iv) the positive adjustment of $1.5 million to Organovo's valuation per the terms of the Amendment to Merger Agreement.

The Exchange Ratio is calculated using a formula intended to allocate a percentage of the combined organization to existing Tarveda securityholders. Based on the assumptions described above, the Exchange Ratio would be equal to approximately 0.1311 shares of Organovo common stock for each share of Tarveda common stock (without giving effect to the Organovo Reverse Stock Split), which Exchange Ratio is subject to change based on the amount of Organovo net cash, Organovo and Tarveda debt and changes in the capitalization of Organovo or Tarveda prior to the Closing (and as a result, Organovo securityholders and Tarveda securityholders could own more or less of the combined organization).

Immediately prior to the Effective Time, all outstanding shares of Tarveda preferred stock will be converted into shares of Tarveda common stock. For a more complete description of the Merger and the Exchange Ratio please see the section titled "*The Merger Agreement*" in this proxy statement/prospectus/information statement.

The Closing will occur as promptly as practicable (but in no event later than the second business day after the last of the conditions to the Merger has been satisfied or waived (other than those conditions that by their nature are to be satisfied at the Closing, but subject to the satisfaction or waiver of each such conditions), or at such other time as Organovo and Tarveda agree. Organovo and Tarveda anticipate that the consummation of the Merger will occur in Organovo's fourth fiscal quarter of 2020 (the quarter ending March 31, 2020). However, because the Merger is subject to a number of conditions, neither Organovo nor Tarveda can predict exactly when the Closing will occur or if it will occur at all.

Reasons for the Merger (see page 122)

Following the Merger, the combined organization will continue to focus on the development of Tarveda's new class of potent and selective precision oncology medicines, which it refers to as *Pentarin* miniature drug conjugates, for the treatment of patients with various solid tumor malignancies. Organovo and Tarveda believe that the combined organization will have the following potential advantages:

- the development of Tarveda's new class of precision oncology medicines for the treatment of patients with various solid tumor malignancies has potential to create value for the current Organovo and Tarveda stockholders;
- Tarveda's product discovery platform has the potential to generate additional promising clinical candidates in the coming years;
- Tarveda's executive leadership team, which has extensive experience launching multiple drugs with other pharmaceutical and biotech companies, as well as broad public company management experience, will enable the combined organization to reach significant value inflection points;
- Tarveda has a significant intellectual property position supporting the commercialization of its products; and
- the combined organization will be led by Tarveda's experienced senior management team and a well-qualified board of directors consisting of eight members, six of whom shall be designated by Tarveda.

Each of the boards of directors of Organovo and Tarveda also considered other reasons for the Merger, as described herein. For example, the Organovo board of directors considered, among other things:

- the strategic alternatives to the Merger available to Organovo, including the discussions that Organovo's management and the Organovo board of directors and special committee previously conducted with other potential merger partners;
- the risks and delays associated with, and uncertain value and costs to Organovo stockholders of, liquidating Organovo, including the uncertainties of continuing cash burn while contingent liabilities are resolved, uncertainty of timing of release of cash until contingent liabilities are resolved, and the risks associated with being a shell company prior to cash distribution, including the risks associated with delisting;
- the risks and challenges of attempting to continue to operate Organovo on a stand-alone basis, including the early development stage of Organovo's, and its collaborators', potential therapeutic and commercial product candidates and the significant time and amount of additional financial resources that would be required to pursue further development, seek regulatory appraisals and commence commercialization activities with no ultimate assurance that such activities would be successful or enable Organovo to operate as a profitable business; and
- the opportunity as a result of the Merger for Organovo stockholders to participate in the potential value of Tarveda's product portfolio and the potential growth of the combined organization following the Merger.

Opinion of Organovo's Special Committee's Financial Advisor (see page 128)

On December 12, 2019, in conjunction with the signing of the Merger Agreement, Roth Capital Partners, LLC ("Roth") rendered an oral opinion to the Organovo special committee (which was confirmed in writing by delivery of Roth's written opinion dated December 12, 2019), as to the fairness, from a financial point of view, to Organovo of the Merger consideration to be paid by Organovo to the holders of the shares of Tarveda common stock (other than shares held in the treasury of Tarveda, shares held by Organovo or Merger Sub and any dissenting shares) in the Merger, as of December 12, 2019, based upon and subject to the procedures followed, assumptions made, qualifications and limitations on the review undertaken and other matters considered by Roth in preparing its opinion.

Roth's opinion was directed to the Organovo special committee and only addressed the fairness from a financial point of view to Organovo of the Merger consideration to be paid by Organovo to the holders of the shares of Tarveda Common Stock (other than shares held in the treasury of Tarveda, shares held by Organovo or Merger Sub and any dissenting shares) in the Merger and does not address any other aspect or implication of the Merger. The summary of Roth's opinion in this proxy statement/prospectus/information statement is qualified in its entirety by reference to the full text of its written opinion, which is included as *Annex B* to this proxy statement/prospectus/information statement and sets forth the procedures followed, assumptions made, qualifications and limitations on the review undertaken and other matters considered by Roth in preparing its opinion. The opinion did not address the relative merits of the Merger as compared to any alternative business strategies or transactions that might be available to Organovo or any other party, nor did it address the underlying business decision of the Organovo special committee, the Organovo board of directors, Organovo, its securityholders, Tarveda, its securityholders, or any other party or entity to proceed with or effect the Merger or any terms or aspects of any voting or other agreements to be entered into in connection with the Merger, any potential financing for the Merger or the likelihood of consummation of such financing. Roth's opinion should not be construed as creating any fiduciary duty on Roth's part to any party or entity. Roth's opinion was not intended to be, and does not constitute, advice or a recommendation to the Organovo special committee, or the Organovo board of

directors or any stockholder of either Organovo or Tarveda as to how to act or vote with respect to the Merger or related matters. Please see *"The Merger — Opinion of Organovo's Special Committee's Financial Advisor"* in this proxy statement/prospectus/information statement for additional information.

Overview of the Merger Agreement

Merger Consideration and Adjustment *(see page 142)*

At the Effective Time, each outstanding share of common stock of Tarveda will be converted into the right to receive a number of shares of Organovo common stock.

The Merger Agreement does not provide for an adjustment to the total number of shares of Organovo common stock that Tarveda stockholders will be entitled to receive for changes in the market price of Organovo common stock. Accordingly, the market value of the shares of Organovo common stock issued pursuant to the Merger will depend on the market value of the shares of Organovo common stock at the time the Merger closes, and could vary significantly from the market value of the shares of Organovo common stock on the date of this proxy statement/prospectus/information statement.

At the Effective Time:

- each share of Tarveda common stock outstanding immediately prior to the Effective Time (excluding certain shares of Tarveda common stock that may be cancelled pursuant to the Merger Agreement and shares held by stockholders who have exercised and perfected appraisal rights or dissenters' rights as more fully described in "*The Merger — Appraisal Rights and Dissenters' Rights*" below) will automatically be converted into the right to receive a number of shares of Organovo common stock pursuant to the estimated Exchange Ratio of 0.1311 (without giving effect to the proposed Organovo Reverse Stock Split). The estimated Exchange Ratio contained herein is based upon Organovo's and Tarveda's capitalization immediately prior to the date of this proxy statement/prospectus/information statement, and is subject to change based on the amount of Organovo net cash, Organovo's and Tarveda's debt, or changes in the capitalization of Organovo or Tarveda prior to the Closing;
- each option to purchase shares of Tarveda common stock outstanding and unexercised immediately prior to the Effective Time will be assumed by Organovo and will become an option to purchase shares of Organovo common stock, with the number of shares and exercise price being adjusted by the Exchange Ratio; and
- each warrant to purchase shares of Tarveda capital stock outstanding and not terminated or exercised immediately prior to the Effective Time will be assumed by Organovo and will become a warrant to purchase shares of Organovo common stock, with the number of shares and exercise price being adjusted by the Exchange Ratio (which is subject to adjustment to account for the proposed Organovo Reverse Stock Split).

The Exchange Ratio provided herein is an estimate based upon capitalization immediately prior to the date of this proxy statement/prospectus/information statement. The final Exchange Ratio calculation is the quotient determined by ***dividing*** the Surviving Corporation Allocation Shares (as defined herein) by the total number of shares of Tarveda common stock outstanding immediately prior to the Closing as expressed on a fully-diluted and as-converted to common stock basis in the manner described in the Merger Agreement.

Treatment of Tarveda Stock Options and Warrants *(see page 154)*

At the Effective Time, each option to purchase Tarveda common stock that is outstanding and unexercised immediately prior to the Effective Time under the Tarveda Therapeutics, Inc. 2011 Stock Incentive Plan (the

"2011 Tarveda Plan"), whether or not vested, will be converted into an option to purchase Organovo common stock. Organovo will assume the 2011 Tarveda Plan. All rights with respect to Tarveda common stock under Tarveda options assumed by Organovo will be converted into rights with respect to Organovo common stock. Accordingly, from and after the Effective Time, each Tarveda stock option assumed by Organovo may be exercised for such number of shares of Organovo common stock as is determined by multiplying the number of shares of Tarveda common stock subject to the option by the Exchange Ratio (which is subject to adjustments to account for the effect of the proposed Organovo Reverse Stock Split) and rounding that result down to the nearest whole number of shares of Organovo common stock. The per share exercise price of the converted option will be determined by dividing the existing exercise price of the option by the Exchange Ratio (which is subject to adjustments to account for the effect of the proposed Organovo Reverse Stock Split prior to the consummation of the Merger) and rounding that result up to the nearest whole cent. Any restrictions on the exercise of any Tarveda option assumed by Organovo will continue following the conversion and the term, exercisability, vesting schedules and other provisions of assumed Tarveda options will generally remain unchanged; provided, that the Organovo board of directors will succeed to the authority of the Tarveda board of directors with respect to each assumed Tarveda option.

Tarveda previously issued warrants to purchase shares of its common stock, Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series C Preferred Stock and Series D Preferred Stock. On December 14, 2019, each outstanding warrant to purchase Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series C Preferred Stock or Series D Preferred Stock became exercisable for the same number of shares of common stock as the number of shares of the applicable series of preferred stock the holder of such warrant would have received if the warrant had been exercised prior to December 14, 2019. On December 14, 2019, each outstanding warrant to purchase Series D Preferred Stock (held by Oxford Finance LLC ("Oxford")) was amended and restated such they are exercisable for the same number of shares of Series 1 Preferred Stock as the number of shares of Series D Preferred Stock for they would have been exercisable prior to the amendment and restatement. Each outstanding warrant to purchase shares of Tarveda capital stock not terminated or exercised at or prior to the Effective Time will be assumed by Organovo at the Effective Time in accordance with its terms and will become a warrant to purchase shares of Organovo common stock. The number of shares of Organovo common stock subject to each assumed warrant will be determined by multiplying the number of shares of Tarveda common stock issuable (including upon conversion of shares of preferred stock issuable following exercise) upon exercise of such warrant prior to the Effective Time by the Exchange Ratio (which is subject to adjustments to account for the effect of the proposed Organovo Reverse Stock Split prior to the consummation of the Merger) and rounding that result down to the nearest whole number of shares of Organovo common stock. The per share exercise price for the Organovo common stock issuable upon exercise of each of the assumed warrants will be determined by dividing the per share exercise price of the Tarveda capital stock subject to each warrant as in effect immediately prior to the Effective Time by the Exchange Ratio (which is subject to adjustments to account for the effect of the proposed Organovo Reverse Stock Split prior to the consummation of the Merger) and rounding that result up to the nearest whole cent.

Conditions to the Completion of the Merger *(see page 156)*

To consummate the Merger, Organovo stockholders must approve the issuance of shares of Organovo common stock in the Merger to the Tarveda securityholders and approve the amendment to the certificate of incorporation of Organovo effecting the Organovo Reverse Stock Split. Additionally, the Tarveda stockholders must approve the Merger and adopt the Merger Agreement and the related transactions. In addition to obtaining such stockholder approvals and appropriate regulatory approvals, each of the other closing conditions set forth in the Merger Agreement must be satisfied or waived.

No Solicitation *(see page 160)*

Each of Organovo and Tarveda agreed that, subject to limited exceptions, Organovo and Tarveda and any of their respective subsidiaries will not, and each party will use its reasonable best efforts to cause each of its officers, directors, employees, investment bankers, attorneys, accountants, representatives, consultants or other agents retained by it or any of its subsidiaries not to, directly or indirectly:

- solicit, initiate, knowingly encourage, induce or knowingly facilitate the communication, making, submission or announcement of, any "acquisition proposal" or "acquisition inquiry," each as defined in the Merger Agreement, or take any action that would reasonably be expected to lead to an acquisition proposal or an acquisition inquiry;
- furnish any nonpublic information with respect to it to any person in connection with or in response to an acquisition proposal or acquisition inquiry;
- engage in discussions or negotiations with any person with respect to any acquisition proposal or acquisition inquiry;
- approve, endorse or recommend an acquisition proposal;
- execute or enter into any letter of intent or similar document or any contract contemplating or otherwise relating to an "acquisition transaction," as defined in the Merger Agreement; or
- grant any waiver or release under any confidentiality, standstill or similar agreement, other than to either Organovo or Tarveda.

Termination *(see page 166)*

Either Organovo or Tarveda can terminate the Merger Agreement under certain circumstances, which would prevent the Merger from being consummated.

Termination Fee *(see page 169)*

If the Merger Agreement is terminated under certain circumstances, Organovo or Tarveda will be required to pay the other party a termination fee equal to $1.0 million ($2.0 million in certain circumstances) and the third-party expenses incurred by the other party, up to a maximum of $0.3 million ($0.5 million in certain circumstances).

Amendment to Merger Agreement *(See page 171)*

On January 26, 2020, Organovo, Merger Sub and Tarveda entered into the First Amendment (the "Amendment to Merger Agreement") to the Merger Agreement.

The Amendment to Merger Agreement amends the definition of Organovo's valuation under the terms of the Merger Agreement to increase Organovo's valuation by $1.5 million for value attributable to Organovo's intellectual property if Organovo does not sell or transfer its intellectual property and remaining assets prior to the closing of the Merger. The Amendment to Merger Agreement also makes technical changes to the Organovo stockholder proposals to be voted on by the Organovo stockholders at the Organovo special meeting.

For more information, please see the section titled "*Merger Agreement — Amendment*" of this proxy statement/prospectus/information statement.

Support Agreements (see page 172)

Certain Tarveda stockholders are each party to a support agreement with Organovo pursuant to which, among other things, each of these stockholders agreed, solely in its capacity as a stockholder, to vote all of its shares of Tarveda capital stock in favor of the adoption of the Merger Agreement, in favor of any proposal to adjourn or postpone the meeting if there are not sufficient votes for the adoption of the Merger Agreement and approval of related transactions on the date on which such meeting is held and the approval of any other matter necessary to consummate the transactions contemplated by the Merger Agreement that are considered and voted upon by Tarveda's stockholders, and against any "acquisition proposal," as defined in the Merger Agreement. The parties to the Tarveda support agreements with Organovo are:

Andrew J. Fromkin
Jeffrey D. Bloss
Brian K. Roberts
Mark T. Bilodeau
Sudhakar Kadiyala
Dennis Ausiello
Omid Farokhzad
Nilesh Kumar
Robert S. Langer, Jr.
Guido Magni
Michael A. Metzger
Aymeric Sallin
Novo Holdings A/S
NanoDimension, L.P.
NanoDimension II, L.P.
Versant Affiliates Fund V, L.P.
Versant Ophthalmic Affiliates Fund I, L.P.
Versant Venture Capital V (Canada) LP
Versant Venture Capital V, L.P.

The stockholders of Tarveda that are party to a support agreement with Organovo owned an aggregate of 62.7 million shares of Tarveda preferred stock, representing approximately 95% of the outstanding shares of Tarveda capital stock on an as-converted to common stock basis, in each case as of December 31, 2019. These stockholders include only executive officers and directors of Tarveda and entities owning more than 5% of Tarveda's outstanding stock. Following the effectiveness of the Registration Statement of which this proxy statement/prospectus/information statement is a part, stockholders of Tarveda holding a sufficient number of shares to adopt the Merger Agreement and approve the Merger will execute written consents providing for such adoption and approval.

Certain Organovo stockholders are each party to a support agreement with Tarveda pursuant to which, among other things, each of these stockholders agreed, solely in its capacity as a stockholder, to vote all of its shares of Organovo common stock (a) in favor of the Organovo Stockholder Proposals any other matter necessary to consummate the transactions contemplated by the Merger Agreement and voted on by the Organovo stockholders and (b) against any "acquisition proposal," as defined in the Merger Agreement.

The stockholders of Organovo that are party to a support agreement with Tarveda owned an aggregate of 334,729 outstanding shares of Organovo common stock, representing less than 1% of the outstanding Organovo common stock as of December 31, 2019. These stockholders include certain officers and directors of Organovo, including:

Taylor Crouch
Craig Kussman
Jennifer Bush
Carolyn D. Beaver
Mark Kessel
Kirk Malloy
Richard Maroun
David Shapiro

Lock-Up Agreements (see page 172)

Certain Organovo and Tarveda stockholders have entered into lock-up agreements, pursuant to which such parties have agreed not to, except in limited circumstances, sell or transfer, or engage in swap or similar transactions with respect to, shares of Organovo common stock, including, as applicable, shares received in the Merger and issuable upon exercise of certain options, in each case from the Closing until the date that is 180 days from the Closing.

As of December 31, 2019, Organovo stockholders who have executed lock-up agreements owned in the aggregate less than 1% of the outstanding voting shares of Organovo common stock.

Tarveda stockholders who have executed lock-up agreements as of December 31, 2019 owned in the aggregate approximately 95% of the outstanding shares of Tarveda capital stock on an as converted into common stock basis.

Management Following the Merger (see page 240)

Effective as of the consummation of the Merger, Organovo's executive officers (who are currently executive officers of Tarveda) are expected to be:

Name	Position(s)
Andrew J. Fromkin	President, Chief Executive Officer and Chairman
Jeffrey D. Bloss, M.D.	Chief Medical Officer
Brian K. Roberts	Chief Financial Officer, Treasurer and Secretary
Mark T. Bilodeau, Ph.D.	Chief Scientific Officer
Sudhakar Kadiyala, Ph.D.	Executive Vice President, Strategy

Interests of Certain Directors, Officers and Affiliates of Organovo and Tarveda (see pages 136 and 139)

In considering the recommendation of the Organovo board of directors with respect to issuing shares of Organovo common stock pursuant to the Merger Agreement and the other matters to be acted upon by Organovo stockholders at the Organovo special meeting, Organovo stockholders should be aware that certain members of the Organovo board of directors and executive officers of Organovo have interests in the Merger that may be different from, or in addition to, interests they have as Organovo stockholders. For example, Organovo is party to Severance and Change in Control Plan Participation Agreements with each of its executive officers pursuant to the Organovo Severance Plan that may result in the receipt by such executive officers of cash severance payments and other benefits with a total value of approximately $3.06 million (collectively and not individually), but not including the value of any accelerated vesting of Organovo equity awards held by those officers.

Additionally, pursuant to the terms of the Merger Agreement, Carolyn Beaver and Mark Kessel, who are currently directors of Organovo, will continue as directors of the combined organization after the Closing and will be due certain compensation as non-employee directors.

As of December 31, 2019, the directors and executive officers of Organovo owned, in the aggregate, less than 1% of the outstanding voting shares of Organovo common stock. Each of Organovo's officers and directors has entered into support agreements and lock-up agreements in connection with the Merger. The support agreements and lock-up agreements are discussed in greater detail in the section titled "*Agreements Related to the Merger*" in this proxy statement/prospectus/information statement. The Organovo board of directors and special committee were aware of these interests and considered them, among other matters, in the decision to approve the Merger Agreement. For more information, please see the section titled "*The Merger — Interests of the Organovo Directors and Executive Officers in the Merger*" of this proxy statement/prospectus/information statement.

In considering the recommendation of the Tarveda board of directors with respect to approving the Merger and related transactions by written consent, Tarveda stockholders should be aware that certain members of the board of directors and executive officers of Tarveda have interests in the Merger that may be different from, or in addition to, interests they have as Tarveda stockholders. All of Tarveda's executive officers and certain of its directors have options, subject to vesting, to purchase shares of Tarveda common stock that will be converted into and become options to purchase shares of Organovo common stock, Tarveda's directors and executive officers are expected to become directors and executive officers of Organovo upon the consummation of the Merger and all of Tarveda's directors and executive officers are entitled to certain indemnification and liability insurance coverage pursuant to the terms of the Merger Agreement.

As of December 31, 2019, all current directors and executive officers of Tarveda, together with their affiliates, owned approximately 95% of the shares of Tarveda capital stock, on an as-converted to common stock basis. Certain Tarveda officers and directors, and their affiliates, have also entered into support agreements in connection with the Merger. The support agreements are discussed in greater detail in the section titled "*Agreements Related to the Merger — Support Agreements and Written Consent*" in this proxy statement/prospectus/information statement.

In addition, certain of Tarveda's executive officers and directors and affiliates of Tarveda's directors currently hold shares of Tarveda common stock and preferred stock. The shares of Tarveda preferred stock will be converted into shares of Tarveda common stock immediately prior to the consummation of the Merger.

The board of directors of Tarveda was aware of these interests and considered them, among other matters, in its decision to approve the Merger Agreement. For more information, please see the section titled "*The Merger — Interests of the Tarveda Directors and Executive Officers in the Merger*."

Certain Material U.S. Federal Income Tax Consequences of the Merger (see page 145)

Each of Organovo and Tarveda intends the Merger to qualify as a reorganization within the meaning of Section 368(a) of the Code. It is a condition to Organovo's obligation to complete the Merger that Organovo receive a written opinion of its counsel, Gunderson Dettmer (or if Gunderson Dettmer is unable to issue such an opinion, Organovo's Replacement Counsel), to the effect that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. It is a condition to Tarveda's obligation to complete the Merger that Tarveda receive an opinion of its counsel, Cooley (or if Cooley is unable to issue such an opinion, Tarveda's Replacement Counsel), to the effect that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. In general and subject to the qualifications and limitations set forth in the section titled "*The Merger — Certain Material U.S. Federal Income Tax Consequences of the Merger*," if the Merger qualifies as a "reorganization" within the meaning of Section 368(a) of the Code, the material tax consequences to U.S. Holders (as defined in the section titled "*The Merger — Certain Material U.S. Federal Income Tax Consequences of the Merger*") of Tarveda common stock will be as follows:

- a Tarveda stockholder generally will not recognize gain or loss upon the exchange of Tarveda common stock for Organovo common stock pursuant to the Merger, except to the extent of cash received in lieu of a fractional share of Organovo common stock as described below;
- a Tarveda stockholder who receives cash in lieu of a fractional share of Organovo common stock in the Merger generally will recognize capital gain or loss in an amount equal to the difference between the amount of cash received instead of a fractional share and the stockholder's tax basis allocable to such fractional share;
- a Tarveda stockholder's aggregate tax basis for the shares of Organovo common stock received in the Merger (including any fractional share interest for which cash is received) generally will equal the stockholder's aggregate tax basis in the shares of Tarveda common stock surrendered in the Merger; and

- the holding period of the shares of Organovo common stock received by a Tarveda stockholder in the Merger generally will include the holding period of the shares of Tarveda common stock surrendered in exchange therefor.

In addition, for purposes of the above discussion of the bases and holding periods for shares of Tarveda common stock and Organovo common stock, Tarveda stockholders who acquired different blocks of Tarveda common stock at different times for different prices must calculate their gains and losses and holding periods separately for each identifiable block of such stock exchanged in the Merger.

Tax matters are very complicated, and the tax consequences of the Merger to a particular Tarveda stockholder will depend on such stockholder's circumstances. Accordingly, you are strongly urged to consult your tax advisor for a full understanding of the tax consequences of the Merger to you, including the applicability and effect of federal, state, local and non-U.S. income and other tax laws. In addition, if any of the tax opinion representations and assumptions are incorrect, incomplete or are inaccurate or are violated, the accuracy of those opinions described above may be affected and the U.S. federal income tax consequences of the Merger could differ from those described in this proxy statement/prospectus/information statement. For more information, please see the section titled "*The Merger — Certain Material U.S. Federal Income Tax Consequences of the Merger*" beginning on page 145 of this proxy statement/prospectus/information statement.

Risk Factors (see page 30)

Both Organovo and Tarveda are subject to various risks associated with their businesses and their industries. In addition, the Merger, including the possibility that the Merger may not be completed, poses a number of risks to each company and its respective stockholders, including the following risks:

- The Exchange Ratio is not adjustable based on the market price of Organovo common stock so the Merger consideration at the Closing may have a greater or lesser value than at the time the Merger Agreement was signed; however, the estimated Exchange Ratio is based upon Organovo's capitalization immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted based on the amount of Organovo net cash, Organovo and Tarveda debt and changes in the capitalization of Organovo or Tarveda prior to the consummation of the Merger;
- Failure to complete the Merger may result in Organovo and Tarveda paying a termination fee or expenses to the other and could harm the common stock price of Organovo and future business and operations of each company;
- The Merger may be completed even though material adverse changes may result solely from the announcement of the Merger, changes in the industry in which Organovo and Tarveda operate that apply to all companies generally and other causes;
- Some Organovo and Tarveda officers and directors have conflicts of interest that may influence them to support or approve the Merger without regard to your interests;
- The market price of the combined organization common stock may decline as a result of the Merger;
- Organovo and Tarveda stockholders may not realize a benefit from the Merger commensurate with the ownership dilution they will experience in connection with the Merger;
- During the pendency of the Merger, Organovo and Tarveda may not be able to enter into a business combination with another party under certain circumstances because of restrictions in the Merger Agreement, which could adversely affect their respective businesses;
- Certain provisions of the Merger Agreement may discourage third parties from submitting alternative takeover proposals, including proposals that may be superior to the arrangements contemplated by the Merger Agreement;

- Because the lack of a public market for Tarveda shares makes it difficult to evaluate the fairness of the Merger, the stockholders of Tarveda may receive consideration in the Merger that is less than the fair market value of the Tarveda shares and/or Organovo may pay more than the fair market value of the Tarveda shares; and
- If the conditions to the Merger are not met, the Merger will not occur.

These risks and other risks are discussed in greater detail under the section titled "*Risk Factors*" in this proxy statement/prospectus/information statement. Organovo and Tarveda both encourage you to read and consider all of these risks carefully.

Regulatory Approvals (see page 144)

In the United States, Organovo must comply with applicable federal and state securities laws and the rules and regulations of The Nasdaq Stock Market LLC ("Nasdaq") in connection with the issuance of shares of Organovo common stock and the filing of this proxy statement/prospectus/information statement with the SEC. As of the date hereof, the Registration Statement, of which this proxy statement/prospectus/information statement is a part, has not become effective.

Nasdaq Stock Market Listing (see page 148)

Organvo common stock currently is listed on The Nasdaq Capital Market under the symbol "ONVO." Prior to consummation of the Merger, Organovo intends to file an initial listing application with The Nasdaq Capital Market pursuant to Nasdaq rules relating to reverse mergers. If such application is accepted, Organovo anticipates that Tarveda's common stock will be listed on The Nasdaq Capital Market following the closing of the Merger under Organovo's new name, "Tarveda Therapeutics, Inc." with the trading symbol "TVDA".

Anticipated Accounting Treatment (see page 148)

The Merger will be treated by Organovo as a reverse recapitalization in accordance with accounting principles generally accepted in the United States. For accounting purposes, Tarveda is considered to be acquiring Organovo in the Merger.

Appraisal Rights and Dissenters' Rights (see page 149)

Holders of Organovo common stock are not entitled to appraisal rights in connection with the Merger. Tarveda stockholders are entitled to appraisal rights in connection with the Merger under Delaware law. For more information about such rights, see the provisions of Section 262 of the Delaware General Corporation Law (the "DGCL"), attached hereto as *Annex C*, and the section titled "*The Merger — Appraisal Rights and Dissenters' Rights*" in this proxy statement/prospectus/information statement.

Comparison of Stockholder Rights (see page 270)

Both Organovo and Tarveda are incorporated under the laws of the State of Delaware and, accordingly, the rights of the stockholders of each are currently, and will continue to be, governed by the DGCL. If the Merger is completed, Tarveda stockholders will become stockholders of Organovo, and their rights will be governed by the DGCL, the bylaws of Organovo and, assuming Organovo Proposal No. 2 is approved by Organovo stockholders at the Organovo special meeting, the certificate of incorporation of Organovo, as amended by the certificate of amendment attached to this proxy statement/prospectus/information statement as *Annex D*. The rights of Organovo stockholders contained in the certificate of incorporation and bylaws of Organovo differ from the rights of Tarveda stockholders under the fourth amended and restated certificate of incorporation, as amended, and bylaws of Tarveda, as more fully described under the section titled "*Comparison of Rights of Holders of Organovo Stock and Tarveda Stock*" in this proxy statement/prospectus/information statement.

SELECTED HISTORICAL AND UNAUDITED PRO FORMA COMBINED FINANCIAL DATA

The following tables present summary historical financial data for Organovo and Tarveda, summary unaudited pro forma combined financial data for Organovo and Tarveda, and comparative historical and unaudited pro forma per share data for Organovo and Tarveda. The following information does not give effect to the proposed Organovo Reverse Stock Split. See "Incorporation of Certain Information by Reference" for instructions on how to obtain the information that has been incorporated by reference.

Selected Historical Consolidated Financial Data of Organovo

The following tables summarize Organovo's consolidated financial data. The information set forth below is only a summary that you should read together with the historical audited consolidated statements of Organovo for the fiscal years ended March 31, 2019 and 2018 and the unaudited interim condensed consolidated financial statements for the nine months period ended December 31, 2019 and 2018 and the related notes, as well as the sections titled "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" contained in Organovo's annual report on Form 10-K for the year ended March 31, 2019 and quarterly report on Form 10-Q for the nine months ended December 31, 2019 that Organovo previously filed with the SEC and that are incorporated by reference into this proxy statement/prospectus/information statement. In the opinion of Organovo's management, the unaudited consolidated interim financial data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the financial information in those statements. Organovo's historical results are not necessarily indicative of results that should be expected in any future period.

	For the Year Ended March 31, 2019	For the Nine Months Ended December 31, 2019
	(in thousands, except share and per share data)	
Revenues		
Products and services	$ 2,333	$ 2,055
Collaborations and licenses	171	89
Grants	587	52
Total revenues	3,091	2,196
Cost of revenues	482	328
Research and development expenses	14,752	5,413
Selling, general, and administrative expense	15,131	15,037
Total costs and expenses	30,365	20,450
Loss from operations	(27,274)	(18,582)
Other income (expense)		
Gain (loss) on fixed asset disposals	(63)	111
Interest income	705	507
Gain on lease termination	—	525
Other income	—	1,454
Total other income	642	2,597
Income tax expense	(3)	(2)
Net loss	$ (26,635)	$ (15,987)
Net loss per common share — basic and diluted	$ (0.23)	$ (0.12)
Weighted average shares used in computing net loss per common shares — basic and diluted	115,379,902	129,234,731

	As of December 31, 2019 (in thousands)
Consolidated Balance Sheet Data:	
Cash and cash equivalents	$ 30,467
Restricted cash	79
Working capital (1)	28,748
Total assets	31,312
Total stockholders' equity	28,954

(1) Working capital is defined as current assets less current liabilities.

Selected Historical Financial Data of Tarveda

The following tables summarize Tarveda's financial data. The statements of operations and comprehensive loss data for the year ended March 31, 2019 and the balance sheet data as of March 31, 2019 have been derived from Tarveda's audited financial statements appearing elsewhere in this proxy statement/prospectus/information statement. The statement of operations and comprehensive loss data for the nine months ended December 31, 2019 and the balance sheet data as of December 31, 2019 have been derived from Tarveda's unaudited financial statements appearing elsewhere in this proxy statement/prospectus/information statement. The unaudited financial statements of Tarveda have been prepared on the same basis as the audited financial statements of Tarveda. In the opinion of Tarveda's management, the unaudited interim financial data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the financial information in those statements. The following selected financial data should be read together with "*Tarveda Management's Discussion and Analysis of Financial Condition and Results of Operations*" and Tarveda's financial statements and the related notes appearing elsewhere in this proxy statement/prospectus/information statement. Tarveda's historical results are not necessarily indicative of results that should be expected in any future period.

	For the Year Ended March 31, 2019	For the Nine Months Ended December 31, 2019
	(in thousands, except share and per share data)	
Operating expenses:		
Research and development	$ 16,685	$ 11,124
General and administrative	4,847	4,709
Total operating expenses	21,532	15,833
Loss from operations	(21,532)	(15,833)
Other income (expense):		
Interest expense, net	(447)	(664)
Loss on extinguishment of debt	(403)	—
Change in fair value of warrant liability	21	16
Other income, net	267	187
Total other expense	(562)	(461)
Loss before income taxes	(22,094)	(16,294)
Net loss	(22,094)	(16,294)
Net loss attributable to common stockholders — basic and diluted	$ (26,937)	$ (3,379)
Net loss attributable to Series CS preferred stockholders — basic and diluted	$ —	$ (36,451)
Weighted average common shares outstanding — basic and diluted	4,105,757	17,789,978
Weighted average Series CS preferred shares outstanding — basic and diluted	—	3,838,902
Net loss per share attributable to common stockholders — basic and diluted	$ (6.56)	$ (0.19)
Net loss per share attributable to Series CS stockholders — basic and diluted	$ —	$ (9.50)

	As of December 31, 2019 (in thousands)
Balance Sheet Data:	
Cash and cash equivalents	$ 15,463
Restricted cash	184
Working capital (1)	12,286
Total assets	21,159
Long-term debt, including accretion	9,877
Redeemable convertible preferred stock classified outside of stockholders' deficit	13,677
Total stockholders' deficit	(10,249)

(1) Working capital is defined as current assets less current liabilities.

Selected Unaudited Pro Forma Combined Financial Data of Organovo and Tarveda

The following unaudited pro forma combined financial information gives effect to the Merger but does not give effect to the proposed Organovo Reverse Stock Split because the proposed reverse stock split is a range and is not final.

In the unaudited pro forma combined financial statements, the Merger has been accounted for as a reverse recapitalization under U.S. GAAP because the primary assets of Organovo at the Effective Date are expected to be primarily cash and short-term investments. Tarveda was determined to be the accounting acquirer based upon the terms of the Merger and other factors including: (1) Tarveda stockholders will own a substantial majority of the voting rights of the combined organization; (2) Tarveda will designate a majority (six of eight) of the initial members of the board of directors of the combined organization; and (3) Tarveda's senior management will hold all key positions in senior management of the combined organization.

The unaudited pro forma combined balance sheet data as of December 31, 2019 gives effect to the Merger as if it took place on December 31, 2019. The unaudited pro forma combined statements of operations and comprehensive loss data for the year ended March 31, 2019 and the nine months ended December 31, 2019 gives effect to the Merger as if it took place on April 1, 2018. The historical financial statements of Organovo and Tarveda have been adjusted to give pro forma effect to events that are (1) directly attributable to the Merger, (2) factually supportable, and (3) with respect to the unaudited pro forma combined statements of operations, expected to have a continuing impact on the combined results of operations of the combined organization. The adjustments presented on the unaudited pro forma condensed combined financial statements have been identified and presented to provide relevant information necessary for an accurate understanding of the combined organization upon consummation of the Merger.

The unaudited pro forma condensed combined financial information is based on assumptions and adjustments that are described in the accompanying notes. The unaudited pro forma condensed combined financial information is for illustrative purposes only. The financial results may have been different had the companies always been combined. The unaudited pro forma condensed combined financial information should not be relied upon as being indicative of the historical results that would have been achieved had the companies always been combined or the future results that the combined organization will experience. The actual amounts recorded as of the completion of the Merger may differ materially from the information presented in these unaudited pro forma combined financial statements as a result of the amount of cash used by Organovo's operations between the signing of the Merger Agreement and the Closing, the timing of Closing of the Merger, and other changes in Organovo's assets and liabilities that occur prior to the completion of the Merger.

The unaudited pro forma combined financial statements, including the notes thereto, should be read in conjunction with the separate historical consolidated financial statements of Organovo and Tarveda and the sections titled "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" in the

documents that are incorporated by reference in this proxy statement/prospectus/information statement and the section of this proxy statement/prospectus/information statement titled "*Tarveda Management's Discussion and Analysis of Financial Condition and Results of Operations.*" Organovo's historical audited consolidated financial statements for the year ended March 31, 2019 and unaudited condensed consolidated financial statements for the nine months ended December 31, 2019 are incorporated by reference in this proxy statement/prospectus/information statement. Tarveda's historical audited financial statements for the year ended March 31, 2019 and unaudited financial statements for the nine months ended December 31, 2019 appear elsewhere in this proxy statement/prospectus/information statement.

	Pro Forma	
	Year Ended March 31, 2019	Nine Months Ended December 31, 2019
	(in thousands, except share and per share data)	
Combined Statement of Operations Data:		
Revenues:		
Products and services	$ 2,333	$ 2,055
Collaborations and licenses	171	89
Grants	587	52
Total revenues	3,091	2,196
Cost of revenues	482	328
Operating expenses:		
Research and development	31,437	16,537
General and administrative	19,978	19,746
Total operating expenses	51,415	36,283
Loss from operations	(48,806)	(34,415)
Other income (expense):		
Interest income (expense)	258	(157)
Gain (loss) on fixed asset disposal	(63)	111
Gain on termination of lease	—	525
Loss on extinguishment of debt	(403)	—
Other income, net	267	1,641
Total other income, net	59	2,120
Loss before income taxes	(48,747)	(32,295)
Income tax provision	(3)	(2)
Net loss	$ (48,750)	$ (32,297)
Net loss attributable to common stockholders	$ (48,750)	$ 12,129
Net loss per share attributable to common stockholders—basic and diluted	$ (0.09)	$ (0.00)
Weighted average common shares outstanding—basic and diluted	540,887,981	555,658,231

	Pro Forma As of December 31, 2019 (in thousands)
Combined Balance Sheet Data:	
Cash and cash equivalents	$ 45,930
Restricted cash	263
Working capital (1)	30,364
Total assets	52,471
Loans payable, including current portion	9,877
Total stockholders' equity	21,879

(1) Working capital is defined as current assets less current liabilities.

Comparative Historical and Unaudited Pro Forma Per Share Data

The information below reflects the historical per share information for Organovo and Tarveda and the unaudited pro forma per share information of the combined organization as if Organovo and Tarveda had been combined as of or for the periods presented.

The pro forma amounts in the tables below have been derived from the unaudited pro forma combined financial information included in the section titled "*Unaudited Pro Forma Combined Financial Statements*" of this proxy statement/prospectus/information statement. The pro forma amounts are presented for illustrative purposes only and are not necessarily indicative of what the financial position, results of operations or per share information of the combined organization would have been had Organovo and Tarveda been combined as of or for the periods presented.

The tables below should be read in conjunction with the consolidated financial statements and the related notes of Organovo incorporated by reference in this proxy statement/prospectus/information statement and the financial statements and the related notes of Tarveda appearing elsewhere in this proxy statement/prospectus/information statement.

	Year Ended March 31, 2019	Nine Months Ended December 31, 2019
Organovo		
Book value per share — historical (1)	$ 0.29	$ 0.22
Basic and diluted net loss per share — historical	$ (0.23)	$ (0.12)
Tarveda		
Book value per share — historical (1)	$ (7.75)	$ (0.00)
Basic and diluted net loss per share — historical	$ (6.56)	$ (1.08)
Unaudited Pro Forma Combined		
Book value per share — pro forma (2)	N/A	$ 0.04
Basic and diluted net loss per share — pro forma	$ (0.09)	$ (0.00)
Tarveda Unaudited Pro Forma Equivalent Data per Share (3)		
Book value per share — pro forma	N/A	$ 0.00
Basic and diluted net loss per share — pro forma	$ (0.01)	$ (0.00)

(1) Historical book value per share is calculated by dividing total stockholders' deficit by total outstanding shares of common stock.
(2) Combined pro forma book value per share is calculated by dividing pro forma combined total stockholders' deficit by pro forma combined total outstanding shares of common stock.

(3) Tarveda Unaudited Pro Forma Equivalent Data per share is calculated by applying the assumed Exchange Ratio of 0.1331 to the unaudited pro forma combined per share data. The assumed Exchange Ratio calculated for purposes of determining the Tarveda Unaudited Pro Forma Equivalent Data per share is based on the definition in the Merger Agreement using the companies' fully-diluted outstanding shares as of December 31, 2019 and will differ from the actual Exchange Ratio based on shares, warrants and equity awards outstanding on the Closing and Organovo's net cash and Organovo's and Tarveda's debt at the Closing.

MARKET PRICE AND DIVIDEND INFORMATION

Organovo Common Stock

Organovo common stock is listed on The Nasdaq Capital Market under the symbol "ONVO." The closing price of Organovo common stock on February 21, 2020, as reported on The Nasdaq Capital Market, was $0.35 per share.

Because the market price of Organovo common stock is subject to fluctuation, the market value of the shares of Organovo common stock that Tarveda stockholders will be entitled to receive in the Merger may increase or decrease.

Assuming approval of Organovo Proposal Nos. 1 and 2 and successful application for initial listing with The Nasdaq Capital Market, following the consummation of the Merger, Organovo common stock will be listed on The Nasdaq Capital Market and will trade under Organovo's new name, "Tarveda Therapeutics, Inc." and new trading symbol, "TVDA."

As of February 14, 2020, the record date for the Organovo special meeting, Organovo had approximately 89 holders of record of its common stock. As of February 14, 2020, Tarveda had 56 holders of record of its common stock and preferred stock. For detailed information regarding the beneficial ownership of certain stockholders of Organovo upon consummation of the Merger, see the section titled "*Principal Stockholders of Combined Organization*" in this proxy statement/prospectus/information statement.

Dividends

Organovo

Organovo has never declared or paid any cash dividends on its capital stock, and it does not currently anticipate declaring or paying cash dividends on its capital stock in the foreseeable future. Organovo intends to retain all future earnings, if any, to finance the operation and expansion of Organovo's business. Any future determination relating to Organovo's dividend policy will be made at the discretion of Organovo's board of directors and will depend on a number of factors, including future earnings, capital requirements, financial conditions, future prospects, contractual restrictions and covenants and other factors that Organovo's board of directors may deem relevant.

Tarveda

Tarveda has never paid or declared any cash dividends on its common stock. Regardless of whether the Merger occurs or does not occur, Tarveda does not anticipate paying any cash dividends on its common stock in the foreseeable future, and Tarveda intends to retain all available funds and any future earnings to fund the development and expansion of its business. In addition, Tarveda's ability to pay dividends is limited by covenants in Tarveda's loan agreement. Following the Merger, Tarveda will be a holding company, and its ability to pay dividends will be dependent upon its subsidiaries' ability to make distributions, which may be restricted by covenants in Tarveda's loan agreement or any future contractual obligations. Any future determination to pay dividends will be at the discretion of Tarveda board of directors and will depend upon a number of factors, including its results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors the board of directors of Tarveda deems relevant.

Holders of Tarveda's outstanding Series 1 Preferred Stock are entitled to receive cumulative, non-compounding dividends from the date of issuance thereof at an annual rate of $0.06606 per share of Series 1 Preferred Stock. Such dividends, as accrued and accumulated, increase the ratio into which shares of Tarveda's preferred stock convert into Tarveda common stock upon conversion immediately prior to the Merger. Dividends payable to holders of Tarveda's Series 1 Preferred Stock will continue to accrue until the Series 1 Preferred Stock is converted into Tarveda common stock immediately prior to the Merger.

RISK FACTORS

The combined organization will be faced with a market environment that cannot be predicted and that involves significant risks, many of which will be beyond its control. In addition to the other information contained in this proxy statement/prospectus/information statement, you should carefully consider the material risks described below and those described in the section of this proxy statement/prospectus/information statement titled "Forward-Looking Statements" before deciding how to vote your shares of stock. In addition, you should read and consider the risks associated with the business of Organovo because these risks may also affect the combined organization — these risks can be found in Organovo's Annual Report on Form 10-K, as updated by subsequent Quarterly Reports on Form 10-Q, all of which are filed with the SEC and incorporated by reference into this proxy statement/prospectus/information statement. You should also read and consider the other information in this proxy statement/prospectus/information statement and the other documents incorporated by reference into this proxy statement/prospectus/information statement. Please see the sections titled "Where You Can Find More Information" and "Incorporation of Certain Documents By Reference" in this proxy statement/prospectus/information statement.

Risks Related to the Merger

The Exchange Ratio is not adjustable based on the market price of Organovo common stock so the Merger consideration at the Closing may have a greater or lesser value than at the time the Merger Agreement was signed.

The estimated Exchange Ratio calculation contained herein is based upon Organovo's and Tarveda's capitalization immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted based on the amount of Organovo net cash, Organovo and Tarveda debt and changes in the capitalization of Organovo or Tarveda prior to the Closing, not taking into account the Organovo Reverse Stock Split, as described in the section titled "*The Merger — Merger Consideration and Adjustment*" of this proxy statement/prospectus/information statement. Any changes in the market price of Organovo common stock before the completion of the Merger will not affect the number of shares Tarveda securityholders will be entitled to receive pursuant to the Merger Agreement. Therefore, if before the completion of the Merger the market price of Organovo common stock declines from the market price on the date of the Merger Agreement, then Tarveda securityholders could receive merger consideration with substantially lower value. Similarly, if before the completion of the Merger the market price of Organovo common stock increases from the market price on the date of the Merger Agreement, then, Tarveda securityholders could receive merger consideration with considerably more value for their shares of Tarveda capital stock than the parties had negotiated for in the establishment of the Exchange Ratio. The Merger Agreement does not include a price-based termination right. Because the Exchange Ratio does not adjust as a result of changes in the value of Organovo common stock, for each one percentage point that the market value of Organovo common stock rises or declines, there is a corresponding one percentage point rise or decline, respectively, in the value of the total merger consideration issued to Tarveda securityholders.

Failure to complete the Merger may result in Organovo or Tarveda paying a termination fee or reimbursing expenses to the other party and could harm the common stock price of Organovo and future business and operations of each company.

If the Merger is not completed, Organovo and Tarveda are subject to the following risks:

- if the Merger Agreement is terminated under certain circumstances, Organovo or Tarveda will be required to pay certain transaction expenses incurred by other party, up to a maximum of $0.3 million (or $0.5 million in certain circumstances);
- if the Merger Agreement is terminated under certain circumstances, Organovo or Tarveda will be required to pay the other party a termination fee equal to $1.0 million (or $2.0 million in certain circumstances) and the third-party expenses incurred by the other party up to a maximum of $0.3 million (or $0.5 million in certain circumstances);

- the price of Organovo stock may decline and remain volatile; and
- costs related to the Merger, such as legal and accounting fees which Organovo and Tarveda estimate will total approximately $4.2 million and $3.3 million, respectively, some of which must be paid even if the Merger is not completed.

In addition, if the Merger Agreement is terminated and the Organovo board of directors or the Tarveda board of directors determines to seek another business combination, there can be no assurance that either Organovo or Tarveda will be able to find a partner willing to provide equivalent or more attractive consideration than the consideration to be provided by each party in the Merger on a timely basis, or at all.

The Merger may be completed even though material adverse changes may result from the announcement of the Merger, industry-wide changes and other causes.

In general, either Organovo or Tarveda can refuse to complete the Merger if there is a material adverse change affecting the other party between December 13, 2019, the date of the Merger Agreement, and the Closing. However, certain types of changes do not permit either party to refuse to complete the Merger, even if such change could be said to have a material adverse effect on Organovo or Tarveda, including:

- any effect resulting from the execution, delivery, announcement or performance of obligations under the Merger Agreement or the announcement or pendency or anticipated consummation of the Merger or any related transactions;
- any natural disaster or any act of terrorism, sabotage, military action or war (whether or not declared) or escalation or any worsening thereof;
- any change in United States generally accepted accounting principles ("GAAP") or any change in applicable laws, rules or regulations or the interpretation thereof;
- any conditions generally affecting the industries in which Tarveda and Organovo and their respective subsidiaries participate or the United States or global economy or capital markets as a whole to the extent such conditions do not have a disproportionate impact on Tarveda or Organovo and their respective subsidiaries, as applicable;
- any failure by Tarveda or Organovo to meet internal projections or forecasts or third-party revenue or earnings predictions for any period ending on or after the date of the Merger Agreement; or
- the resignation or termination of any director or officer of Tarveda or Organovo.

If adverse changes occur and Organovo and Tarveda still complete the Merger, the combined organization stock price may suffer. This in turn may reduce the value of the Merger to the stockholders of Organovo, Tarveda or both.

Some Organovo and Tarveda officers and directors have interests in the Merger that are different from yours and that may influence them to support or approve the Merger without regard to your interests.

Certain officers and directors of Organovo and Tarveda participate in arrangements that provide them with interests in the Merger that are different from yours, including, among others, the continued service as an officer or director of the combined organization, severance benefits, the acceleration of stock option vesting, continued indemnification and the potential ability to sell an increased number of shares of common stock of the combined organization in accordance with Rule 144 under the Securities Act of 1933, as amended (the "Securities Act"). For example, in November 2015 Organovo entered into a Severance and Change in Control Plan Participation Agreement with each of its executive officers and certain key employees pursuant to the Organovo Severance Plan, which was approved by Organovo's compensation committee. The Organovo Severance Plan establishes the amount of severance payments and benefits available in the event of a (i) termination of employment by

Organovo for reasons other than cause, death or disability or by the participant for good reason and (ii) termination of employment by Organovo for reasons other than cause, death or disability or by the participant for good reason within six months before or within 12 months after a change in control. Organovo's executive officers, including Taylor Crouch, Organovo's Chief Executive Officer, who also serves on Organovo's board of directors, are each parties to a participation agreement under the Organovo Severance Plan and are contractually entitled to severance payments, including a cash severance payment equal to a multiple of the employee's base salary, paid in a lump sum, plus a target bonus for the fiscal year in which the termination occurs, health benefit continuation for up to 18 months, and outplacement assistance. In addition, Organovo's executive officers are also entitled to full accelerated vesting of all outstanding equity grants and a one-year time period to exercise any stock options or stock appreciation rights.

Based on the terms of their respective participation agreements, Organovo's executive officers will be entitled to receive a total value of approximately $3.06 million (collectively, not individually) in connection with the consummation of the Merger and the associated termination of their employment from Organovo, not including the value associated with the acceleration of their outstanding equity awards.

Additionally, the directors and officers of Organovo are parties to the Organovo support agreements and lock-up agreements with Organovo and Tarveda.

The Organovo board of directors and special committee was aware of these interests and considered them, among other matters, in the decision to approve the Merger Agreement. For more information, please see the section titled "*The Merger — Interests of the Organovo Directors and Executive Officers in the Merger*" of this proxy statement/prospectus/information statement.

All of Tarveda's executive officers and certain of its directors have options, subject to vesting, to purchase shares of Tarveda common stock which shall be converted into and become options to purchase shares of Organovo common stock, Tarveda's directors and executive officers are expected to become directors and executive officers of Organovo upon the consummation of the Merger and all of Tarveda's directors and executive officers are entitled to certain indemnification and liability insurance coverage pursuant to the terms of the Merger Agreement. In addition, certain of Tarveda's executive officers and directors and affiliates of Tarveda's directors currently hold shares of Tarveda common stock and preferred stock. The shares of Tarveda preferred stock will be converted into shares of Tarveda common stock prior to the consummation of the Merger. In addition and for example, certain of Tarveda's officers received grants of shares of Tarveda common stock prior to the execution of the Merger Agreement, certain of Tarveda's directors and executive officers have options, subject to vesting, to purchase shares of Tarveda common stock, which shall be converted into and become options to purchase shares of Organovo common stock, certain of Tarveda's directors and executive officers are expected to become directors and executive officers of Organovo upon the closing of the merger and all of Tarveda's directors and executive officers are entitled to certain indemnification and liability insurance coverage pursuant to the terms of the Merger Agreement.

These interests, among others, may influence the officers and directors of Organovo and Tarveda to support or approve the Merger. For more information concerning the interests of Organovo and Tarveda executive officers and directors, see the sections titled "*The Merger — Interests of the Organovo Directors and Executive Officers in the Merger*" and "*The Merger — Interests of the Tarveda Directors and Executive Officers in the Merger*" in this proxy statement/prospectus/information statement.

The market price of the combined organization's common stock following the Merger may decline as a result of the Merger.

The market price of Organovo common stock may decline as a result of the Merger for a number of reasons including if:

- investors react negatively to the prospects of the combined organization's business and prospects from the Merger;

- the effect of the Merger on the combined organization's business and prospects is not consistent with the expectations of financial or industry analysts; or
- the combined organization does not achieve the perceived benefits of the Merger as rapidly or to the extent anticipated by financial or industry analysts.

Organovo and Tarveda stockholders may not realize a benefit from the Merger commensurate with the ownership dilution they will experience in connection with the Merger.

If the combined organization is unable to realize the full strategic and financial benefits currently anticipated from the Merger, Organovo and Tarveda stockholders will have experienced substantial dilution of their ownership interests in their respective companies without receiving any commensurate benefit, or only receiving part of the commensurate benefit to the extent the combined organization is able to realize only part of the strategic and financial benefits currently anticipated from the Merger.

During the pendency of the Merger, Organovo and Tarveda may not be able to enter into a business combination with another party at a favorable price because of restrictions in the Merger Agreement, which could adversely affect their respective businesses.

Covenants in the Merger Agreement impede the ability of Organovo and Tarveda to make acquisitions, subject to certain exceptions relating to fiduciaries duties, as set forth below, or complete other transactions that are not in the ordinary course of business, subject to certain exceptions, pending completion of the Merger. As a result, if the Merger is not completed, the parties may be at a disadvantage to their competitors during that period. In addition, while the Merger Agreement is in effect, each party is generally prohibited from, among other things, soliciting, initiating, knowingly encouraging or entering into certain extraordinary transactions, such as a merger, sale of assets or other business combination outside the ordinary course of business, with any third party. Any such transactions could be favorable to such party's stockholders.

Certain provisions of the Merger Agreement may discourage third parties from submitting alternative takeover proposals, including proposals that may be superior to the arrangements contemplated by the Merger Agreement.

The terms of the Merger Agreement prohibit each of Organovo and Tarveda from soliciting alternative takeover proposals or cooperating with persons making unsolicited takeover proposals, except in limited circumstances when, among other things, such party's board of directors determines in good faith that an unsolicited alternative takeover proposal is or is reasonably likely to result in a superior takeover proposal and that failure to cooperate with the proponent of the proposal is a breach of the board's fiduciary duties. In addition, if Organovo or Tarveda terminate the Merger Agreement under certain circumstances, including terminating because of a decision of a board of directors to recommend a superior proposal, Organovo or Tarveda would be required to pay to the other party a termination fee equal to $1.0 million (or $2.0 million in certain circumstances) and the third-party expenses incurred by the other party, up to a maximum of $0.3 million (or $0.5 million in certain circumstances). This termination fee may discourage third parties from submitting alternative takeover proposals to Organovo or Tarveda or their stockholders, and may cause the respective boards of directors to be less inclined to recommend an alternative proposal.

Because the lack of a public market for Tarveda shares makes it difficult to evaluate the fairness of the Merger, the stockholders of Tarveda may receive consideration in the Merger that is less than the fair market value of the Tarveda shares.

The outstanding capital stock of Tarveda is privately held and is not traded in any public market. The lack of a public market makes it extremely difficult to determine the fair market value of Tarveda. Because the percentage of Organovo equity to be issued to Tarveda stockholders was determined based on negotiations

between the parties, it is possible that the value of the Organovo common stock to be received by Tarveda stockholders will be less than the fair market value of Tarveda, or Organovo may pay more than the aggregate fair market value for Tarveda.

Because the lack of a public market for Tarveda shares makes it difficult to evaluate the fairness of the Merger, the stockholders of Tarveda may receive consideration in the Merger that is less than the fair market value of the Tarveda shares.

The outstanding capital stock of Tarveda is privately held and is not traded in any public market. The lack of a public market makes it extremely difficult to determine the fair market value of Tarveda. Because the percentage of Organovo equity to be issued to Tarveda stockholders was determined based on negotiations between the parties, it is possible that the value of the Organovo common stock to be received by Tarveda stockholders will be less than the fair market value of Tarveda, or Organovo may pay more than the aggregate fair market value for Tarveda.

If the conditions to the Merger are not met, the Merger will not occur.

Even if the Merger is approved by the stockholders of Organovo and Tarveda, specified conditions must be satisfied or waived to complete the Merger. These conditions are set forth in the Merger Agreement and described in the section titled "*The Merger Agreement — Conditions to the Completion of the Merger*" in this proxy statement/prospectus/information statement. Organovo and Tarveda cannot assure you that all of the conditions will be satisfied. If the conditions are not satisfied or waived, the Merger will not occur or will be delayed, and Organovo and Tarveda each may lose some or all of the intended benefits of the Merger.

If the Merger does not qualify as a "reorganization" for U.S. federal income tax purposes, U.S. Holders of Tarveda common stock will be required to recognize gain or loss for U.S. federal income tax purposes upon the exchange of their Tarveda common stock for Organovo common stock in the Merger.

The U.S. federal income tax consequences of the Merger to U.S. Holders (as defined in the section titled "*The Merger — Certain Material U.S. Federal Income Tax Consequences of the Merger*") will depend on whether the Merger qualifies as a "reorganization" for U.S. federal income tax purposes. Organovo's and Tarveda's obligations to effect the Merger are subject to the satisfaction, or waiver, at or prior to the effective time of the Merger, of the condition that each company receive an opinion of counsel (or Organovo's Replacement Counsel or Tarveda's Replacement Counsel, in each case, if applicable), dated as of the closing date of the Merger, to the effect that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. If, contrary to the opinions from counsel, the Merger fails to qualify as a reorganization within the meaning of Section 368(a) of the Code, a U.S. Holder of Tarveda common stock would recognize gain or loss for U.S. federal income tax purposes on each share of Tarveda common stock surrendered in the Merger for Organovo common stock and any cash received in lieu of a fractional share. For a more complete discussion of the material U.S. federal income tax consequences of the Merger, please carefully review the information set forth in the section titled "*The Merger —Certain Material U.S. Federal Income Tax Consequences of the Merger*" in this proxy statement/prospectus/information statement.

Risks Related to the Proposed Organovo Reverse Stock Split

The proposed Organovo Reverse Stock Split may not increase the combined organization's stock price over the long-term.

The principal purpose of the proposed Organovo Reverse Stock Split is to increase the per-share market price of Organovo common stock and provide for sufficient authorized shares of Organovo common stock to issue shares of Organovo common stock in the Merger. It cannot be assured, however, that the proposed Organovo Reverse Stock Split will accomplish the objective of increasing the per-share market price of Organovo common stock for any meaningful period of time. While it is expected that the reduction in the number

of outstanding shares of Organovo common stock will proportionally increase the market price of Organovo common stock, it cannot be assured that the proposed Organovo Reverse Stock Split will increase the market price of Organovo common stock by a multiple of the proposed Organovo Reverse Stock Split ratio, or result in any permanent or sustained increase in the market price of Organovo common stock, which is dependent upon many factors, including the combined organization's business and financial performance, general market conditions and prospects for future success. Therefore, while the stock price of the combined organization might meet the continued listing requirements for The Nasdaq Capital Market initially, it cannot be assured that it will continue to do so.

The proposed Organovo Reverse Stock Split may decrease the liquidity of the combined organization's common stock.

Although the Organovo board of directors believes that the anticipated increase in the market price of the combined organization's common stock could encourage interest in its common stock and possibly promote greater liquidity for its stockholders, such liquidity could also be adversely affected by the reduced number of shares outstanding after the proposed Organovo Reverse Stock Split. The reduction in the number of outstanding shares may lead to reduced trading and a smaller number of market makers for Organovo common stock.

The proposed Organovo Reverse Stock Split may lead to a decrease in the combined organization's overall market capitalization.

Should the market price of the combined organization's common stock decline after the proposed Organovo Reverse Stock Split, the percentage decline may be greater, due to the smaller number of shares outstanding, than it would have been prior to the proposed Organovo Reverse Stock Split. A reverse stock split may be viewed negatively by the market and, consequently, can lead to a decrease in the combined organization's overall market capitalization. If the per share market price does not increase in proportion to the proposed Organovo Reverse Stock Split ratio, then the value of the combined organization, as measured by its stock capitalization, will be reduced. In some cases, the per-share stock price of companies that have effected reverse stock splits subsequently declined back to pre-reverse split levels, and accordingly, it cannot be assured that the total market value of Organovo common stock will remain the same after the proposed Organovo Reverse Stock Split is effected, or that the proposed Organovo Reverse Stock Split will not have an adverse effect on the stock price of Organovo common stock due to the reduced number of shares outstanding after the proposed Organovo Reverse Stock Split.

Risks Related to Organovo's Capital Requirements, Finances and Operations if the Merger is not Completed

There is no assurance that the proposed Merger between Organovo and Tarveda will be completed in a timely manner or at all. If the Merger with Tarveda is not consummated, Organovo's business could suffer materially and its stock price could decline.

The consummation of the Merger between Organovo and Tarveda is subject to a number of closing conditions, including approval by Organovo's and Tarveda's respective stockholders and other customary closing conditions. The parties are targeting a Closing of the transaction in the first calendar quarter of 2020, however, there can be no assurance that the Merger will be consummated within this desired timeframe, or at all.

If the Merger between Organovo and Tarveda is not consummated, Organovo may be subject to a number of material risks, and its business and stock price could be adversely affected, as follows:

- Organovo has incurred and expects to continue to incur significant expenses related to the Merger with Tarveda, even if the Merger is not consummated;
- Organovo could be obligated to pay Tarveda a $1.0 million (or $2.0 million in certain circumstances) termination fee and expense reimbursements in connection with the termination of the Merger Agreement, depending on the reason for the termination;

- The market price of Organovo's common stock may decline to the extent that the current market price reflects a market assumption that the Merger will be completed; and
- Nasdaq could determine to delist Organovo's common stock which could have an adverse effect on the value of Organovo's common stock and any future ability to raise capital.

If the Merger is not completed, Organovo may be unsuccessful in completing an alternative strategic transaction on terms that are as favorable as the terms of the proposed transaction with Tarveda, or at all, and Organovo may be unable to reestablish a viable operating business.

To date, Organovo has not generated significant revenue from product sales, and its assets currently consist primarily of cash, cash equivalents and marketable securities, its intellectual property portfolio, license and collaboration agreements, its remaining assets, its listing on The Nasdaq Capital Market and the Merger Agreement with Tarveda. While Organovo has entered into the Merger Agreement with Tarveda, the consummation of the Merger with Tarveda may be delayed or may not occur at all. If the Merger is not completed, the Organovo board of directors may elect to pursue an alternative strategic transaction similar to the proposed Merger with Tarveda. Attempting to complete an alternative transaction will be costly and time consuming. If the Merger with Tarveda is not completed and the Organovo board of directors determines to pursue an alternative transaction, the terms of any such alternative transaction may not be as favorable to Organovo and its stockholders as the terms of the Merger with Tarveda, and Organovo can make no assurances that such an alternative transaction would occur at all. Further, if the Merger with Tarveda is not completed, given the level of investment and time that would be required to redesign its liver tissue product or pursue the development of products and services pursuant to its collaboration agreements, it is unlikely that Organovo would be able to obtain the funding required to recommence its product development activities on terms favorable to its stockholders, or at all.

If the Merger is not completed, Organovo's board of directors may decide to pursue a dissolution and liquidation of Organovo. In such an event, the amount of cash available for distribution to its stockholders will depend heavily on the timing of such liquidation as well as the amount of cash that will need to be reserved for commitments and contingent liabilities.

There can be no assurance that the Merger will be completed. If the Merger is not completed, the Organovo board of directors may decide to pursue a dissolution and liquidation of Organovo. In such an event, the amount of cash available for distribution to its stockholders will depend heavily on the timing of such decision, as with the passage of time the amount of cash available for distribution will be reduced as Organovo continues to fund its operations. In addition, if Organovo's board of directors were to approve and recommend, and its stockholders were to approve, a dissolution and liquidation of Organovo, Organovo would be required under Delaware corporate law to pay its outstanding obligations, as well as to make reasonable provision for contingent and unknown obligations, prior to making any distributions in liquidation to its stockholders. As a result of this requirement, a portion of Organovo's remaining cash assets may need to be reserved pending the resolution of such obligations. In addition, Organovo may be subject to litigation or other claims related to a dissolution and liquidation of Organovo. If a dissolution and liquidation were pursued, Organovo's board of directors, in consultation with its advisors, would need to evaluate these matters and make a determination about a reasonable amount to reserve. Accordingly, holders of Organovo common stock could lose all or a significant portion of their investment in the event of Organovo's liquidation, dissolution or winding up.

Organovo may be unable to continue as a going concern if the Merger is not completed.

Organovo has had recurring losses from operations since inception and will likely not generate meaningful revenue for the foreseeable future. Organovo believes that its existing cash, cash equivalents and marketable securities and interest thereon will be sufficient to fund its projected operating requirements under its current operating plan. However, if the Merger is not completed and Organovo's operating plans change and its

projected operating requirements increase, Organovo may be unable to continue as a going concern. In this event, the perception that Organovo may not be able to continue as a going concern may have an adverse impact on its business due to concerns about its ability to meet its future contractual obligations or pursue additional strategic transactions. Further, if Organovo is unable to continue as a going concern, Organovo may have to liquidate its assets, and the values it receives for its assets in liquidation and dissolution could be significantly lower than the values reflected in its financial statements and an investor could lose all or part of its investment in Organovo.

If Organovo were to continue to advance its research and development activities and pursue development of any of its pipeline products, it would require substantial additional funding. Raising additional capital would cause dilution to its existing stockholders, and may restrict its operations or require it to relinquish rights to its technologies or to a product candidate.

Organovo currently does not have any committed external source of funds and does not expect to generate any meaningful revenue in the foreseeable future. Organovo believes that its existing cash, cash equivalents and marketable securities and interest thereon will be sufficient to fund its projected operating requirements under its current operating plan. Organovo has based its estimates on assumptions that may prove to be wrong, and it may use its available capital resources sooner than it currently expects if its operating plans change. If the Merger is not completed and Organovo's current operating plans change and it determines to pursue further research and development activities, it will require substantial additional funding to operate, and would expect to finance these cash needs through a combination of equity offerings, debt financings, government or other third-party funding and licensing or collaboration arrangements.

To the extent that Organovo raises additional capital through the sale of equity or convertible debt, the ownership interests of its stockholders will be diluted. In addition, the terms of any equity or convertible debt it agrees to issue may include liquidation or other preferences that adversely affect the rights of Organovo's stockholders. Convertible debt financing, if available, may involve agreements that include covenants limiting or restricting Organovo's ability to take specific actions, such as incurring additional debt, making capital expenditures, and declaring dividends, and may impose limitations on its ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact its ability to conduct its business.

Additional funds may not be available when Organovo needs them on terms that are acceptable to Organovo, or at all. If adequate funds are not available to Organovo on a timely basis, it may be required to curtail or cease its operations.

If the Merger is not completed, raising additional funding through debt or equity financing would be difficult or not successful at all, would be dilutive and may cause the market price of Orgnanovo's common stock to decline further.

If the Merger is not completed, raising additional funding through debt or equity financing is likely to be difficult or unavailable altogether given the early stage of Organovo's therapeutic candidates. To the extent that Organovo raises additional capital through the sale of equity or convertible debt securities, the issuance of those securities would result in substantial dilution for Organovo's current stockholders and the terms may include liquidation or other preferences that adversely affect the rights of its current stockholders. Furthermore, the issuance of additional securities, whether equity or debt, by Organovo, or the possibility of such issuance, may cause the market price of its common stock to decline further and existing stockholders may not agree with its financing plans or the terms of such financings.

The issuance of shares of Organovo's common stock to Tarveda's stockholders in the Merger will dilute substantially the voting power of Organovo's current stockholders.

If the Merger is completed, each outstanding share of Tarveda capital stock will be converted into the right to receive approximately 0.1311 shares of Organovo common stock, subject to adjustment to account for the

proposed Organovo Reverse Stock Split. Immediately following the Merger, Organovo's stockholders and optionholders are expected to own, or hold rights to acquire, approximately 25% of the common stock of Organovo on a fully diluted basis as defined in the Merger Agreement, and Tarveda's stockholders, optionholders and warrantholders are expected to own, or hold rights to acquire, approximately 75% of the common stock of Organovo on a fully diluted basis as defined in the Merger Agreement. Accordingly, the issuance of shares of Organovo's common stock to Tarveda's stockholders in the Merger will reduce significantly the relative voting power of each share of Organovo's common stock held by its current stockholders. Consequently, Organovo's stockholders as a group will have significantly less influence over the management and polices of the combined organization after the Merger than prior to the Merger.

Organovo has incurred and will continue to incur significant transaction costs in connection with the Merger.

Organovo has incurred and will continue to incur significant transaction costs in connection with the Merger. Organovo estimates that it will incur aggregate direct transaction costs of approximately $3.9 million associated with the Merger and approximately $0.3 million for its portion of shared transaction expenses, as well as additional costs associated with the commencement of the combined organization's operation as a public company, which cannot be estimated accurately at this time.

Organovo's ability to use net operating loss ("NOL") carryforwards and other tax attributes may be limited in connection with the Merger and other ownership changes.

Organovo has incurred substantial losses during its history and does not expect to become profitable in the near future, and Organovo may never achieve profitability. To the extent that Organovo continues to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire (if at all). At March 31, 2019, Organovo had federal and state NOL carryforwards of approximately $170.3 million and $49.2 million, respectively. Such federal and state NOL carryforwards will begin to expire in 2028, unless previously utilized. At March 31, 2019, Organovo had federal and state research and development credit carryforwards of approximately $4.0 million and $3.6 million, respectively. The federal research and development credit carryforwards will begin expiring in 2028, unless previously utilized.

Under the Tax Act, federal NOLs generated in taxable years ending after December 31, 2017, may be carried forward indefinitely but federal NOLs generated in taxable years beginning after December 31, 2017 may only be used to offset 80% of Organovo's taxable income annually. Organovo's NOL carryforwards are subject to review and possible adjustment by the U.S. Internal Revenue Service (the "IRS"), and state tax authorities. Under Sections 382 and 383 of the Code, Organovo's federal NOL and research and development tax credit carryforwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant stockholders over a three-year period in excess of 50 percentage points. Organovo's ability to utilize its NOL carryforwards and other tax attributes to offset future taxable income or tax liabilities may be limited as a result of ownership changes, including in connection with the Merger. Similar rules may apply under state tax laws. Organovo has not yet determined the amount of the cumulative change in its ownership resulting from the Merger or other transactions, or any resulting limitations on its ability to utilize its NOL carryforwards and other tax attributes. If Organovo earns taxable income, such limitations could result in increased future tax liability to Organovo and its future cash flows could be adversely affected. Organovo has recorded a full valuation allowance related to its NOLs and other deferred tax assets due to the uncertainty of the ultimate realization of the future benefits of those assets.

Risks Related to Tarveda

Tarveda has incurred significant net losses since inception and anticipates that it will continue to incur substantial net losses for the foreseeable future and may never achieve or maintain profitability.

Since inception in 2016, Tarveda has incurred significant net losses and has never generated any revenue from product sales. Tarveda's net loss was $16.3 million and $16.5 million for the nine months ended

December 31, 2019 and 2018, and $22.1 million and $19.0 million for years ended March 31, 2019 and 2018, respectively. As of December 31, 2019, Tarveda had an accumulated deficit of $121.5 million. Although Tarveda completed a private placement of its securities and recapitalization in December 2019 raising gross proceeds of $13.6 million before deducting estimated offering expenses, Tarveda expects to continue to incur significant expenses and increasing net losses for the foreseeable future. Since inception, Tarveda has devoted substantially all of its efforts to identifying, researching and conducting preclinical and clinical activities for its product candidates, acquiring and developing its *Pentarin*, including its Heat Shock Protein 90 ("HSP90") binding miniature drug conjugate platforms and know-how to develop miniature drug conjugates, organizing and staffing the company, business planning, raising capital and establishing its intellectual property portfolio. To date, Tarveda has never obtained regulatory approval for, or commercialized, any products. It could be several years, if ever, before Tarveda has a commercialized product. The net losses Tarveda incurs may fluctuate significantly from quarter to quarter and year to year. Tarveda anticipates that its expenses will increase substantially if, and as, it:

- continues the ongoing and planned development of its product candidates;
- initiates, conducts and completes any ongoing, anticipated or future preclinical studies and clinical trials for its current and future product candidates;
- seeks marketing approvals for any product candidates that successfully complete clinical trials;
- establishes a sales, marketing, manufacturing and distribution infrastructure to commercialize any current or future product candidate for which it may obtain marketing approval;
- seeks to discover and develop additional product candidates;
- continues to build a portfolio of product candidates through the acquisition or in-license of products, product candidates or technologies;
- maintains, protects and expands its intellectual property portfolio;
- makes milestone payments if it successfully achieves certain predetermined milestones under existing or future agreements;
- hires additional clinical, regulatory and scientific personnel;
- adds operational, financial and management information systems and personnel, including personnel to support its product development and planned future commercialization efforts; and
- incurs additional costs associated with operating as a public company.

To become and remain profitable, Tarveda must succeed in developing and eventually commercializing products that generate significant revenue. This will require Tarveda to be successful in a range of challenging activities, including completing preclinical studies and clinical trials of its current and future product candidates, obtaining regulatory approval, procuring commercial-scale manufacturing, marketing and selling any products for which it obtains regulatory approval (including through third parties), as well as discovering or acquiring and developing additional product candidates. Tarveda is only in the preliminary stages of most of these activities. Tarveda may never succeed in these activities and, even if it does, may never generate revenue that is sufficient to offset its expenses and achieve profitability.

Because of the numerous risks and uncertainties associated with biopharmaceutical product development, Tarveda is unable to accurately predict the timing or amount of expenses or when, or if, it will be able to achieve profitability. If Tarveda is required by regulatory authorities to perform studies in addition to those currently expected, or if there are any delays in the initiation and completion of its clinical trials or the development of any of its product candidates, its expenses could increase.

Even if Tarveda does achieve profitability, it may not be able to sustain or increase profitability on a quarterly or annual basis. Tarveda's failure to become and remain profitable would decrease the value of the

company and could impair its ability to raise capital, maintain its research and development efforts, expand its business or continue its operations.

There is substantial doubt about Tarveda's ability to continue as a going concern.

Tarveda has incurred recurring losses since inception, including net losses of $22.1 million and $19.0 million for the years ended March 31, 2019 and 2018, respectively. In addition, as of March 31, 2019, Tarveda had an accumulated deficit of $105.2 million. Tarveda expects to continue to generate operating losses for the foreseeable future and will need to raise additional capital to finance its future operations. Tarveda's management has concluded that these matters raise substantial doubt about its ability to continue as a going concern. Tarveda's financial statements do not include any adjustments that might result from the outcome of this uncertainty. Tarveda's auditors have included an explanatory paragraph in their audit report for this uncertainty. If Tarveda cannot continue as a viable entity, its securityholders may lose some or all of their investment in Tarveda.

Even after completion of the Merger, Tarveda will require substantial additional funding to finance its operations. If Tarveda is unable to raise capital when needed, it could be forced to delay, reduce or terminate certain of its development programs or other operations.

As of December 31, 2019, Tarveda had cash and cash equivalents of $15.5 million. Tarveda believes that its existing cash and cash equivalents as of December 31, 2019, will be sufficient to fund its operating expenses, capital expenditure requirements and debt service payments through September 2020 as a stand-alone private company. Upon completion of the Merger, and after taking into account the expected cash that Organovo will have on its balance sheet at the effective time of the Merger, Tarveda expects to have sufficient cash to fund the combined organization's current operating plans through at least the 18 months following the anticipated effective time of the Merger. However, the combined organization's operating plans may change as a result of many factors currently unknown to Tarveda, and the combined organization may need to seek additional funds sooner than planned. Tarveda expects to finance its cash needs through public or private equity or debt financings, third-party (including government) funding and marketing and distribution arrangements, as well as other collaborations, strategic alliances and licensing arrangements, or any combination of these approaches. The combined organization's future capital requirements will depend on many factors, including:

- the timing, progress and results of Tarveda's ongoing preclinical studies and clinical trials of its product candidates;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials of other product candidates that Tarveda may pursue;
- Tarveda's ability to establish and maintain collaboration, license, grant and other similar arrangements, and the financial terms of any such arrangements, including timing and amount of any future milestones, royalty or other payments due thereunder;
- the costs, timing and outcome of regulatory review of Tarveda's product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of Tarveda's product candidates for which it receives marketing approval;
- the revenue, if any, received from commercial sales of Tarveda's product candidates for which it receives marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing Tarveda's intellectual property rights and defending any intellectual property-related claims;
- any expenses needed to attract, hire and retain skilled personnel;

- the costs of operating as a public company; and
- the extent to which Tarveda acquires or in-license other companies' product candidates and technologies.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and Tarveda may never generate the necessary data or results required to obtain regulatory approval and achieve product sales. In addition, Tarveda's product candidates, if approved, may not achieve commercial success. Tarveda's commercial revenue, if any, will be derived from sales of products that it does not expect to be commercially available for several years, if at all. Accordingly, Tarveda will need to continue to rely on additional financing to achieve its business objectives. Adequate additional financing may not be available to Tarveda on acceptable terms, or at all. If Tarveda is unable to raise capital when needed or on attractive terms, it could be forced to delay, reduce or altogether terminate its research and development programs or future commercialization efforts, which may adversely affect its business, financial condition, results of operations and prospects. In addition, Tarveda may seek additional capital due to favorable market conditions or strategic considerations even if Tarveda believes it has sufficient funds for its current or future operating plans.

The incurrence of debt may impact Tarveda's financial position and subject it to additional financial and operating restrictions.

In March 2019, Tarveda entered into a $10.0 million senior secured term loan credit facility with Oxford. Tarveda's overall leverage and certain covenants and obligations contained in the related documentation could adversely affect its financial health and business and future operations by, among other things:

- making it more difficult to satisfy its obligations, including under the terms of the Oxford loan;
- limiting Tarveda's ability to refinance its debt on terms acceptable to Tarveda or at all
- limiting Tarveda's flexibility to plan for and adjust to changing business and market conditions and increasing its vulnerability to general adverse economic and industry conditions;
- limiting Tarveda's ability to use its available cash flow to fund future acquisitions and to make dividend payments; and
- limiting Tarveda's ability to obtain additional financing for working capital, to fund growth or for general corporate purposes, even when necessary to maintain adequate liquidity.

Furthermore, substantially all of Tarveda's assets, including its intellectual property, secure the Oxford loan. If an event of default under the Oxford loan occurs and is continuing, Oxford may request the acceleration of the related debt and foreclose on the underlying security interests. While Oxford consented to the entry into the Merger Agreement, Tarveda does not yet have Oxford's consent to the consummation of the Merger. Oxford may request additional covenants or other concessions from Tarveda in order to consent to the Merger.

The LIBOR calculation method may change and LIBOR is expected to be phased out after 2021.

Interest on the outstanding principal balance of the loans under the Oxford loan is calculated based on one-month LIBOR, plus an applicable margin. On July 27, 2017, the U.K. Financial Conduct Authority (the "FCA") announced that it will no longer require banks to submit rates for the calculation of LIBOR after 2021. In the meantime, actions by the FCA, other regulators or law enforcement agencies may result in changes to the method by which LIBOR is calculated. At this time, it is not possible to predict the effect of any such changes or any other reforms to LIBOR that may be enacted in the United Kingdom or elsewhere.

Raising additional capital may cause dilution to Tarveda's stockholders, restrict its operations or require it to relinquish rights to its product candidates.

Until such time, if ever, as Tarveda can generate substantial product revenue, it expects to finance its cash needs through public or private equity or debt financings, third-party (including government) funding and collaborations and strategic alliances, or any combination of these approaches. To the extent that Tarveda raises additional capital through the sale of equity or convertible debt securities, your ownership interest may be diluted and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt and equity financings, if available, may involve agreements that include covenants limiting or restricting Tarveda's ability to take specific actions, such as redeeming its shares, making investments, incurring additional debt, making capital expenditures, declaring dividends or placing limitations on its ability to acquire, sell or license intellectual property rights. For example, Tarveda's existing loan with Oxford is secured by a first priority lien on Tarveda's assets and intellectual property, and requires compliance with certain affirmative and negative covenants.

If Tarveda raises additional capital through future collaborations or strategic alliances, it may have to relinquish valuable rights to its intellectual property, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to Tarveda. If Tarveda is unable to raise additional capital when needed, it may be required to delay, limit, reduce or terminate its product development or future commercialization efforts or grant rights to develop and market product candidates that it would otherwise develop and market ourselves.

Tarveda's limited operating history may make it difficult for you to evaluate the success of its business to date and to assess its future viability.

Tarveda is a clinical-stage company that spun out its legacy business and renamed itself Tarveda Therapeutics, Inc. in 2016. Since the spinout, Tarveda's operations have been largely focused on identifying, researching and conducting preclinical and clinical activities of its product candidates, PEN-866 and PEN-221, acquiring and developing its HSP90 binding miniature drug conjugate platform and know-how to develop miniature drug conjugates, organizing and staffing the company, business planning, raising capital and establishing its intellectual property portfolio. As an organization, Tarveda has not yet demonstrated an ability to successfully complete clinical development, obtain regulatory approvals, manufacture a commercial-scale product or conduct sales and marketing activities necessary for successful commercialization or arrange for a third party to conduct these activities on its behalf. Consequently, any predictions about Tarveda's future success or viability may not be as accurate as they could be if it had a longer operating history.

Tarveda currently has two product candidates in its development pipeline. Tarveda may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving its business objectives, including with respect to its *Pentarin* platform including its HSP90 binding miniature drug conjugate platform, and product candidates. Tarveda will need to transition at some point from a company with a research and development focus to a company capable of supporting commercial activities. Tarveda may not be successful in such a transition.

Risks Related to the Design and Development of Tarveda's Drug Candidates

Tarveda is early in its development efforts and its lead drug candidates, PEN-866 and PEN-221 are still in early stage clinical development. Tarveda has not successfully completed late-stage clinical trials or obtained regulatory approval for any drug candidate. Tarveda may never obtain approval for any of its drug candidates or achieve or sustain profitability.

Tarveda currently has no products that are approved for sale. Tarveda is early in its development efforts and has only recently completed enrollment in the Phase 1 portion of the Phase 1/2a trial evaluating PEN-866 in patients with advanced solid tumors. Tarveda's only other drug candidate in clinical trials, PEN-221 is currently

being investigated in an ongoing Phase 2a clinical trial in patients with neuroendocrine cancers, including gastrointestinal, neuroendocrine tumors ("GI NET"), pancreatic neuroendocrine tumors and small cell lung cancer. There can be no assurance that PEN-866, PEN-221 or any future drug candidates in development will achieve success in their clinical trials or obtain regulatory approval.

Tarveda's ability to generate product revenues, which it does not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of PEN-866, PEN-221 or any other future drug candidates in development. The success of its drug candidates, including PEN-886 and PEN-221, will depend on several factors, including the following:

- successful completion of preclinical studies and clinical trials;
- acceptance of INDs by the FDA or other clinical trial or similar applications from foreign regulatory authorities for Tarveda's future clinical trials for its pipeline drug candidates;
- timely and successful enrollment of patients in, and completion of, clinical trials with favorable results;
- demonstration of safety, efficacy and acceptable risk-benefit profiles of its drug candidates to the satisfaction of the FDA and foreign regulatory agencies;
- receipt and related terms of marketing approvals from applicable regulatory authorities, including the completion of any required post-marketing studies or trials;
- for PEN-221, the continued availability of FDA-approved screening diagnostics that detect SSTR2 expression;
- raising additional funds necessary to complete clinical development of and commercialize its drug candidates;
- obtaining and maintaining patent, trade secret and other intellectual property protection and regulatory exclusivity for its drug candidates;
- making arrangements with third-party manufacturers, or establishing manufacturing capabilities, for both clinical and commercial supplies of its drug candidates;
- developing and implementing marketing and reimbursement strategies;
- establishing sales, marketing and distribution capabilities and launching commercial sales of its products, if and when approved, whether alone or in collaboration with others;
- acceptance of Tarveda's products, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies;
- obtaining and maintaining third-party payor coverage and adequate reimbursement;
- protecting and enforcing its rights in its intellectual property portfolio; and
- maintaining a continued acceptable safety profile of the products following approval.

Many of these factors are beyond Tarveda's control, and it is possible that none of its drug candidates will ever obtain regulatory approval even if Tarveda expends substantial time and resources seeking such approval. If Tarveda does not achieve one or more of these factors in a timely manner or at all, it could experience significant delays or an inability to successfully commercialize its drug candidates, which would materially harm its business. For example, Tarveda's business could be harmed if results of the clinical trials of PEN-866, PEN-221 or any other drug candidates vary adversely from its expectations.

Tarveda's approach to the discovery and development of Pentarin miniature drug conjugates, including using its HSP90 binding miniature drug conjugate platform, is based on novel technologies that are unproven and may not result in marketable products.

The scientific research that forms the basis of Tarveda's efforts to discover and develop *Pentarin* miniature drug conjugates, including based on its HSP90 binding miniature drug conjugate platform, is ongoing. Further, the scientific evidence to support the feasibility of developing therapeutic miniature drug conjugates, which it refers to as *Pentarin* miniature drug conjugates, based on Tarveda's HSP90 binding miniature drug conjugate platform and other know-how is both preliminary and limited. Tarveda may not be correct in its assumptions about the superiority of its HSP90 binding miniature drug conjugate platform to develop effective therapeutics that bind to HSP90 to deliver anti-cancer payloads. If its HSP90 binding miniature drug conjugate platform is not able to develop *Pentarin* miniature drug conjugates that are successful in delivering an anti-cancer payload while minimizing toxicity outside the tumor environment, it could have a material and adverse effect on Tarveda's business, financial condition, results of operations and prospects. Further, if PEN-866, as Tarveda's first *Pentarin* developed using the HSP90 binding miniature drug conjugate platform is not successful in achieving its clinical objectives, it would materially and adversely effect Tarveda's ability to leverage its HSP90 binding miniature drug conjugate platform to develop other *Pentarin* miniature drug conjugates to deliver other payloads, which would have a material and adverse effect on Tarveda's business, financial condition, results of operations and prospects.

Drug development involves a lengthy and expensive process. Tarveda may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of PEN-866, PEN-221 or any other drug candidates.

Tarveda currently has only two drug candidates in clinical development, and the risk of failure is high. Tarveda is unable to predict when or if its drug candidates will prove effective or safe in humans or will obtain marketing approval. Before obtaining marketing approval from regulatory authorities for the sale of any drug candidate, Tarveda must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of its drug candidates in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to the outcome. A failure of one or more clinical trials can occur at any stage of testing. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim or preliminary results of a clinical trial do not necessarily predict final results. In particular, the small number of patients in Tarveda's early clinical trials may make the results of these trials less predictive of the outcome of later clinical trials. For example, the Phase 1 trial for PEN-866 consists of approximately 30 patients of various tumor types and the various cohorts of Phase 2a for PEN-221 range from 10 to 25 patients in each cohort.

Tarveda may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent its ability to obtain marketing approval or commercialize its drug candidates, including:

- regulators or institutional review boards ("IRBs") or ethics committees ("ECs") may not authorize Tarveda or its investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- Tarveda may experience delays in reaching, or fail to reach, agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites;
- clinical trials for Tarveda's drug candidates may produce negative or inconclusive results, and Tarveda may decide, or regulators may require it, to conduct additional clinical trials, delay clinical trials or abandon product development programs;
- the number of patients required for clinical trials for its drug candidates may be larger than Tarveda anticipates, enrollment in these clinical trials may be slower than Tarveda anticipates, participants may drop out of these clinical trials at a higher rate than Tarveda anticipates or the duration of these clinical trials may be longer than Tarveda anticipates;

- competition for clinical trial participants from investigational and approved therapies may make it more difficult to enroll patients in Tarveda's clinical trials;
- Tarveda's third-party contractors may fail to meet their contractual obligations to it in a timely manner, or at all, or may fail to comply with regulatory requirements;
- currently available FDA-approved screening diagnostics that are routinely used to detect SSTR2 expression in diagnosing neuroendocrine tumors may cease to be available;
- Tarveda may have to suspend or terminate clinical trials for its drug candidates for various reasons, including a finding that the participants are being exposed to unacceptable health risks;
- Tarveda's drug candidates may have undesirable or unexpected side effects or other unexpected characteristics, causing it or its investigators, regulators or IRBs/ECs to suspend or terminate the trials;
- the cost of clinical trials for Tarveda's drug candidates may be greater than it anticipates; and
- the supply or quality of Tarveda's drug candidates or other materials necessary to conduct clinical trials for its drug candidates may be insufficient or inadequate and result in delays or suspension of its clinical trials.

Tarveda's product development costs will increase if it experiences delays in preclinical studies or clinical trials or in obtaining marketing approvals. Tarveda does not know whether any of its planned preclinical studies or clinical trials will begin on a timely basis or at all, will need to be restructured or will be completed on schedule, or at all. For example, the FDA may place a partial or full clinical hold on, any of Tarveda's clinical trials for a variety of reasons. For example, early in the development of PEN-866 the Phase 1 clinical trial was delayed to resolve a solubility issue. Although rectified, additional issues could arise in the future that could further delay Tarveda's development of PEN-866.

Significant preclinical or clinical trial delays also could shorten any periods during which Tarveda may have the exclusive right to commercialize its drug candidates or allow Tarveda's competitors to bring products to market before it does and impair Tarveda's ability to successfully commercialize its drug candidates and may harm its business and results of operations.

Any delays in the commencement or completion, or termination or suspension, of Tarveda's ongoing, planned or future clinical trials could result in increased costs to Tarveda, delay or limit its ability to generate revenue and adversely affect its commercial prospects.

Before Tarveda can initiate clinical trials of a drug candidate in any indication, Tarveda must submit the results of preclinical studies to the FDA along with other information, including information about the drug candidate's chemistry, manufacturing and controls and its proposed clinical trial protocol, as part of an IND or similar regulatory filing.

Before obtaining marketing approval from the FDA for the sale of PEN-866, PEN-221 or any other drug candidate in any indication, Tarveda must conduct extensive clinical studies to demonstrate safety and efficacy. Clinical testing is expensive, time consuming and uncertain as to outcome. In addition, Tarveda expects to rely in part on preclinical, clinical and quality data generated by its contract research organizations ("CROs") and other third parties for regulatory submissions for its drug candidates. While Tarveda has or will have agreements governing these third parties' services, Tarveda has limited influence over their actual performance. If these third parties do not make data available to Tarveda, or, if the quality or completeness of the data is not appropriate, or if applicable, make regulatory submissions in a timely manner, in each case pursuant to Tarveda's agreements with them, its development programs may be significantly delayed and it may need to conduct additional studies or collect additional data independently. In either case, Tarveda's development costs would increase. To date, Tarveda has submitted two INDs to the FDA: Phase 1/2a clinical trials for both PEN-866 and PEN-221 to evaluate safety and tolerability and one clinical trial authorization ("CTA") to conduct a Phase 1/2a clinical trial

of PEN-221 in the United Kingdom. The FDA may require Tarveda to conduct additional preclinical studies for any drug candidate before it allows Tarveda to initiate clinical trials under any IND, which may lead to additional delays and increase the costs of its preclinical development programs.

Any delays in the commencement or completion of Tarveda's ongoing, planned or future clinical trials could significantly affect its product development costs. Tarveda does not know whether its planned trials will begin on time or at all, or be completed on schedule, if at all. The commencement and completion of clinical trials can be delayed for a number of reasons, including delays related to:

- the FDA disagreeing as to the design or implementation of Tarveda's clinical trials or with its recommended dose for any of its pipeline programs;
- obtaining FDA authorization to commence a trial or reaching a consensus with the FDA on trial design;
- any failure or delay in reaching an agreement with CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining approval from one or more IRBs/ECs;
- IRBs/ECs refusing to approve, suspending or terminating the trial at an investigational site, precluding enrollment of additional subjects, or withdrawing their approval of the trial;
- changes to clinical trial protocol;
- clinical sites deviating from trial protocol or dropping out of a trial;
- failing to manufacture or obtain sufficient quantities of drug candidate or, if applicable, combination therapies for use in clinical trials;
- patients failing to enroll or remain in Tarveda's trial at the rate it expects, or failing to return for post-treatment follow-up;
- patients choosing an alternative treatment, or participating in competing clinical trials;
- lack of adequate funding to continue the clinical trial;
- patients experiencing severe or unexpected drug-related adverse effects;
- occurrence of serious adverse events in trials of the same class of agents conducted by other companies;
- selecting or being required to use clinical end points that require prolonged periods of clinical observation or analysis of the resulting data;
- for PEN-221, the lack of a readily available and FDA-approved screening diagnostics for SSTR2 expression;
- a facility manufacturing Tarveda's drug candidates or any of their components being ordered by the FDA to temporarily or permanently shut down due to violations of current good manufacturing practice ("cGMP"), regulations or other applicable requirements, or infections or cross-contaminations of drug candidates in the manufacturing process;
- lack of stability of Tarveda's clinical trial material or any quality issues that arise with the clinical trial material;
- any changes to Tarveda's manufacturing process that may be necessary or desired;
- third-party clinical investigators losing the licenses or permits necessary to perform Tarveda's clinical trials, not performing Tarveda's clinical trials on its anticipated schedule or consistent with the clinical trial protocol, good clinical practices ("GCP"), or other regulatory requirements;

- Tarveda, or its third-party contractors not performing data collection or analysis in a timely or accurate manner or improperly disclosing data prematurely or otherwise in violation of a clinical trial protocol; or
- third-party contractors becoming debarred or suspended or otherwise penalized by the FDA or other government or regulatory authorities for violations of regulatory requirements, in which case Tarveda may need to find a substitute contractor, and Tarveda may not be able to use some or all of the data produced by such contractors in support of its marketing applications.

Tarveda could also encounter delays if a clinical trial is suspended or terminated by it, by the IRBs/ECs of the institutions in which such trials are being conducted, by a Data Safety Monitoring Board for such trial or by the FDA. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or its clinical protocols, inspection of the clinical trial operations or trial site by the FDA resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a pharmaceutical, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. In addition, changes in regulatory requirements and policies may occur, and Tarveda may need to amend clinical trial protocols to comply with these changes. Amendments may require Tarveda to resubmit its clinical trial protocols to IRBs/ECs for reexamination, which may impact the costs, timing or successful completion of a clinical trial.

If Tarveda experiences delays in the completion of, or termination of, any clinical trial of PEN-866 or PEN-221 or any other drug candidate, the commercial prospects of such drug candidate will be harmed, and Tarveda's ability to generate product revenues will be delayed. Moreover, any delays in completing its clinical trials will increase its costs, slow down its development and approval process and jeopardize Tarveda's ability to commence product sales and generate revenues, which may harm its business, financial condition, results of operations and prospects significantly.

If Tarveda experiences delays or difficulties in enrolling patients in its ongoing or planned clinical trials, its receipt of necessary regulatory approval could be delayed or prevented.

Tarveda may not be able to initiate or continue its ongoing or planned clinical trials for its drug candidates if it is unable to identify and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA. In addition, some of Tarveda's competitors may have ongoing clinical trials for drug candidates that would treat the same patients as PEN-866 or PEN-221 or any other drug candidates, and patients who would otherwise be eligible for Tarveda's clinical trials may instead enroll in clinical trials of its competitors' drug candidates. For example, this is relevant for Tarveda's development of PEN-866 for the treatment of small cell lung cancer, an indication for which investigational drugs are competing for clinical trial participants. In addition, introduction of new drugs to the market place may have an effect on the number of patients available or timing of the availability of the patients. For example, the introduction of Lutathera has changed the treatment paradigm for neuroendocrine patients in the United States and has an impact on the availability of patients for inclusion in the PEN-221 trial. Patient enrollment is also affected by other factors, including:

- severity of the disease under investigation;
- Tarveda's ability to recruit clinical trial investigators of appropriate competencies and experience;
- the incidence and prevalence of Tarveda's target indications;
- clinicians' and patients' awareness of, and perceptions as to the potential advantages and risks of Tarveda's drug candidates in relation to other available therapies, including any new drugs that may be approved for the indications it is investigating;
- invasive procedures required to enroll patients and to obtain evidence of the drug candidate's performance during the clinical trial;

- availability and efficacy of approved medications for the disease under investigation;
- eligibility criteria defined in the protocol for the trial in question;
- the size of the patient population required for analysis of the trial's primary endpoints;
- efforts to facilitate timely enrollment in clinical trials;
- whether Tarveda is subject to a partial or full clinical hold on any of its clinical trials;
- reluctance of physicians to encourage patient participation in clinical trials;
- the ability to monitor patients adequately during and after treatment;
- Tarveda's ability to obtain and maintain patient consents; and
- proximity and availability of clinical trial sites for prospective patients.

Tarveda's inability to enroll a sufficient number of patients for its clinical trials would result in significant delays or may require it to abandon one or more clinical trials altogether. Enrollment delays in its clinical trials may result in increased development costs, which would cause the value of the company to decline and limit its ability to obtain additional financing.

Adverse side effects or other safety risks associated with PEN-866, PEN-221 or any other drug candidates could delay or preclude approval, cause Tarveda to suspend or discontinue clinical trials or abandon further development, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

As is the case with pharmaceuticals generally, and with oncology drugs in particular, Tarveda has observed side effects and adverse events associated with PEN-866 and PEN-221, including but not limited to toxicities consistent with the anti-cancer payloads, including but not limited to fatigue, diarrhea, and neutropenia. While Tarveda has not experienced any serious adverse events to date, they could occur in the future.

Results of Tarveda's ongoing and planned clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. Undesirable side effects caused by Tarveda's drug candidates could result in the delay, suspension or termination of clinical trials by Tarveda or the FDA for a number of reasons. Additionally, due to the high mortality rates of the cancers for which Tarveda is pursuing development and the pretreated nature of many patients in its ongoing and planned clinical trials of PEN-866 and PEN-221 and future drug candidates, a material percentage of patients in these clinical trials may die during a trial. The percentage of patient death, timing of patient death, or cause thereof could impact development of PEN-866, PEN-221 or future drug candidates. If Tarveda elects or is required to delay, suspend or terminate any clinical trial, the commercial prospects of its drug candidates will be harmed and its ability to generate product revenues from its drug candidates will be delayed or eliminated. Serious adverse events observed in clinical trials could hinder or prevent market acceptance of Tarveda's drug candidates. Any of these occurrences may harm Tarveda's business, prospects, financial condition and results of operations significantly.

Moreover, if Tarveda's drug candidates are associated with undesirable side effects in clinical trials or have characteristics that are unexpected, Tarveda may elect to abandon or limit their development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective, which may limit the commercial expectations for its drug candidates, if approved. Tarveda may also be required to modify its study plans based on findings in its clinical trials. Many drugs that initially showed promise in early stage testing have later been found to cause side effects that prevented further development. In addition, regulatory authorities may draw different conclusions or require additional testing to confirm these determinations.

It is possible that as Tarveda tests its drug candidates in larger, longer and more extensive clinical trials, including with different dosing regimens, or as the use of its drug candidates becomes more widespread

following any regulatory approval, illnesses, injuries, discomforts and other adverse events that were observed in earlier trials, as well as conditions that did not occur or went undetected in previous trials, will be reported by patients. If such side effects become known later in development or upon approval, if any, such findings may harm Tarveda's business, financial condition, results of operations and prospects significantly.

In addition, if any of Tarveda's drug candidates receive marketing approval, and it or others later identify undesirable side effects caused by treatment with such drug, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw approval of the drug;
- Tarveda may be required to recall a product or change the way the drug is administered to patients;
- regulatory authorities may require additional warnings on the label, such as a "black box" warning or a contraindication, or issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings or other safety information about the product;
- Tarveda may be required to implement a Risk Evaluation and Mitigation Strategy ("REMS") or create a medication guide outlining the risks of such side effects for distribution to patients;
- additional restrictions may be imposed on the marketing or promotion of the particular product or the manufacturing processes for the product or any component thereof;
- Tarveda could be sued and held liable for harm caused to patients;
- the drug could become less competitive; and
- Tarveda's reputation may suffer.

Any of these events could prevent Tarveda from achieving or maintaining market acceptance of its drug candidates, if approved, and could significantly harm its business, financial condition, results of operations and prospects.

Interim, topline and preliminary data from Tarveda's clinical trials that it announces or publishes from time to time may change as more patient data become available, and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, Tarveda may publicly disclose preliminary, interim or topline data from its clinical trials such as Phase 1 dose escalation data for PEN-866 presented at the European Society for Medical Oncology Congress held in Barcelona, Spain in September 2019, or the PEN-221 Phase 1 clinical data presented at the American Society of Clinical Oncology Annual Meeting held in Chicago, Illinois in June, 2018. These interim updates are based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data related to the particular study or trial. Tarveda also makes assumptions, estimations, calculations and conclusions as part of its analyses of data, and Tarveda may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the topline results that it reports may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Topline data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data it previously published. As a result, topline data should be viewed with caution until the final data are available. In addition, Tarveda may report interim analyses of only certain endpoints rather than all endpoints. Interim data from clinical trials that Tarveda may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse changes between interim data and final data could significantly harm its business and prospects. Further, additional disclosure of interim data by Tarveda or by its competitors in the future could result in stock price volatility.

Further, others, including regulatory agencies, may not accept or agree with Tarveda's assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular drug candidate or product and the company in general. In addition, the information Tarveda chooses to publicly disclose regarding a particular study or clinical trial is typically selected from a more extensive amount of available information. You or others may not agree with what Tarveda determines is the material or otherwise appropriate information to include in its disclosure, and any information Tarveda determines not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular drug, drug candidate or its business. If the preliminary or topline data that Tarveda reports differs from late, final or actual results, or if others, including regulatory authorities, disagree with the conclusions reached, Tarveda's ability to obtain approval for, and commercialize, PEN-866, PEN-221 or any other drug candidates may be harmed, which could harm its business, financial condition, results of operations and prospects.

The continued development and future commercial success of PEN-221 depends in part on the continued availability of FDA-approved screening diagnostic tests that detect SSTR2 expression; the failure to have a readily available FDA-approved screening diagnostic would negatively impact the commercial success of PEN-221 if the continued availability of such screening tests is not assured.

PEN-221 is being developed to treat tumors that express SSTR2. SSTR2 expression is an indicator of many neuroendocrine tumors, and there are currently available FDA-approved screening diagnostic tests that are used to detect such SSTR2 expression and diagnose the existence of neuroendocrine tumors. Because PEN-221 is being developed for tumors that express SSTR2, the inability to detect or differentiate among various types of cancers, and detect SSTR2 expression, would negatively impact both the continued development of PEN-221, as well as future commercial success. Although there are currently approved screening diagnostics on the market, if the owners of such tests fail to maintain FDA-approval, it could prevent or delay approval of PEN-221. In addition, the commercial success of PEN-221 will be tied to and dependent upon the continued availability of an approved screening diagnostic to detect SSTR2 expression begin available to doctors and patients on reasonable terms in the relevant geographies.

Tarveda may expend its limited resources to pursue a particular drug candidate or indication and fail to capitalize on drug candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because Tarveda has limited financial and managerial resources, it focuses on research programs and drug candidates that it identifies for specific indications or on specific paradigms including specific payloads. As a result, Tarveda may forego or delay pursuit of opportunities with other drug candidates or for other indications that later prove to have greater commercial potential. Tarveda's resource allocation decisions may cause it to fail to capitalize on viable commercial products or profitable market opportunities. Tarveda's spending on current and future research and development programs and drug candidates for specific indications may not yield any commercially viable products. If Tarveda does not accurately evaluate the commercial potential or target market for a particular drug candidate, it may relinquish valuable rights to that drug candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for Tarveda to retain sole development and commercialization rights to such drug candidate.

Tarveda may not be successful in its efforts to design additional potential drug candidates, nor move any that are designed into the clinic.

A key element of Tarveda's strategy is to apply its knowledge and understanding of conjugating HSP90 binders to appropriate payloads to design miniature drug conjugates that maintain therapeutic properties while remaining miniature in size to enable rapid penetration into solid tumors. The therapeutic design and development activities that Tarveda is conducting may not be successful in developing drug candidates that are

useful in treating cancer or other diseases. Tarveda's research programs may initially show promise in identifying potential drug candidates, yet fail to yield drug candidates for clinical development for a number of reasons, including:

- the research methodology used may not be successful in identifying potential drug candidates;
- potential drug candidates may, on further study, be shown to have harmful side effects or other characteristics that indicate that they are unlikely to be drugs that will obtain marketing approval or achieve market acceptance; or
- potential drug candidates may not be effective in treating their targeted diseases.

Research programs to identify and design new drug candidates require substantial technical, financial and human resources. Tarveda may choose to focus its efforts and resources on a potential drug candidate that ultimately prove to be unsuccessful. If Tarveda is unable to identify and design suitable drug candidates for preclinical and clinical development, it will not be able to obtain revenues from the sale of products in future periods, which likely would result in significant harm to its financial position and adversely impact your investment.

Tarveda may not be able to obtain or maintain orphan drug designation or exclusivity for its drug candidates.

Regulatory authorities in some jurisdictions, including the United States, may designate drugs for relatively small patient populations as "orphan drugs." Under the Orphan Drug Act, the FDA may designate a drug candidate as an orphan drug if it is intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals in the United States, or if the disease or condition affects more than 200,000 individuals in the United States and there is no reasonable expectation that the cost of developing and making a drug product available in the United States for the type of disease or condition will be recovered from sales of the product.

Orphan drug designation entitles a party to financial incentives, such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. Additionally, if a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity. This means that the FDA may not approve any other applications to market the same drug or biological product for the same indication for seven years, except in certain circumstances, including proving clinical superiority (*i.e.*, another product is safer, more effective or makes a major contribution to patient care) to the product with orphan exclusivity. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity, or obtain approval for the same product but for a different indication than that for which the orphan product has exclusivity. In addition, exclusive marketing rights in the United States may be limited if Tarveda seeks approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective.

Tarveda has obtained orphan drug designation in the United States for use of PEN-866 for treatment of pancreatic cancer, and for use of PEN-221 in treatment of neuroendocrine cancers and separately for the treatment of small cell lung cancer. Tarveda may apply for similar designations in other geographies or for its other drug candidates in the future. Orphan drug status does not ensure that Tarveda will receive marketing exclusivity in a particular market, and Tarveda cannot assure you that any future application for orphan drug designation in any other geography or with respect to any other drug candidate will be granted. Orphan drug designation neither shortens the development time or regulatory review time of a drug, nor gives the drug any advantage in the regulatory review or approval process.

Risks Related to Tarveda's Dependence on Third Parties

Tarveda relies, and intends to continue to rely, on third parties to conduct its clinical trials and perform some of its research and preclinical studies. If these third parties do not satisfactorily carry out their contractual duties, fail to comply with applicable regulatory requirements or do not meet expected deadlines, Tarveda's development programs may be delayed or subject to increased costs or it may be unable to obtain regulatory approval, each of which may have an adverse effect on its business, financial condition, results of operations and prospects.

Tarveda does not have the ability to independently conduct all aspects of its preclinical testing or clinical trials itself. As a result, Tarveda is dependent on third parties to conduct its ongoing and planned clinical trials of PEN-866 and PEN-221 and preclinical studies, and any preclinical studies and clinical trials of any other drug candidates. The timing of the initiation and completion of these trials will therefore be partially controlled by such third parties and may result in delays to its development programs. Specifically, Tarveda expects CROs, clinical investigators and consultants to play a significant role in the conduct of these trials and the subsequent collection and analysis of data. However, Tarveda will not be able to control all aspects of their activities. Nevertheless, Tarveda is responsible for ensuring that each clinical trial is conducted in accordance with the applicable protocol and legal, regulatory and scientific standards, and its reliance on the CROs and other third parties does not relieve it of its regulatory responsibilities. Tarveda and its CROs are required to comply with GCP requirements, which are regulations and guidelines enforced by the FDA for drug candidates in clinical development. Regulatory authorities enforce these GCP requirements through periodic inspections of trial sponsors, clinical trial investigators and clinical trial sites. If Tarveda or any of its CROs or clinical trial sites fail to comply with applicable GCP requirements, the data generated in its clinical trials may be deemed unreliable, and the FDA may require Tarveda to perform additional clinical trials before approving its marketing applications. Tarveda cannot assure you that, upon inspection, the FDA will determine that its clinical trials comply with GCPs. In addition, Tarveda's clinical trials must be conducted with product produced under cGMP regulations. Tarveda's failure or the failure of third parties on whom it relies to comply with these regulations may require it to stop and/or repeat clinical trials, which would delay the marketing approval process.

There is no guarantee that any such CROs, clinical trial investigators or other third parties on which Tarveda relies will devote adequate time and resources to Tarveda's development activities or perform as contractually required. If any of these third parties fail to meet expected deadlines, adhere to Tarveda's clinical protocols or meet regulatory requirements, otherwise perform in a substandard manner, or terminate their engagements with Tarveda, the timelines for its development programs may be extended or delayed or its development activities may be suspended or terminated. If Tarveda's clinical trial site terminates for any reason, it may experience the loss of follow-up information on subjects enrolled in such clinical trial unless it is able to transfer those subjects to another qualified clinical trial site, which may be difficult or impossible.

Furthermore, these third parties may also have relationships with other entities, some of which may be Tarveda's competitors for whom they may also be conducting clinical trials or other pharmaceutical product development activities that could harm its competitive position. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct its clinical trials in accordance with regulatory requirements or Tarveda's stated protocols, Tarveda will not be able to obtain, or may be delayed in obtaining, marketing approvals for PEN-866, PEN-221 or any other drug candidates and will not be able to, or may be delayed in its efforts to, successfully commercialize its products.

Manufacturing pharmaceutical products is complex and subject to product loss for a variety of reasons. Tarveda contracts with third parties for the manufacture of its drug candidates for preclinical testing and clinical trials and expects to continue to do so for commercialization. This reliance on third parties increases the risk that Tarveda will not have sufficient quantities of its drug candidates or products or such quantities at an acceptable cost or quality, which could delay, prevent or impair its development or commercialization efforts.

Tarveda does not have any manufacturing facilities. Tarveda produces in its laboratory very small quantities of PEN-866 and PEN-221 and other drug candidates for evaluation in its research programs. Tarveda relies, and expects to continue to rely, on third parties for the manufacture of its drug candidates for preclinical and clinical testing, as well as for commercial manufacture if any of its drug candidates obtain marketing approval. Some of Tarveda's manufacturers represent its sole source of supply, including PEN-866 and PEN-221. This reliance on third parties increases the risk that Tarveda will not have sufficient quantities of its drug candidates or products or such quantities at an acceptable cost or quality, which could delay, prevent or impair its development or commercialization efforts.

Tarveda may be unable to establish any agreements with third-party manufacturers or to do so on favorable terms. Even if Tarveda is able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- reliance on the third party for regulatory, compliance and quality assurance;
- operations of Tarveda's third-party manufacturers or suppliers could be disrupted by conditions unrelated to its business or operations, including the bankruptcy of the manufacturer or supplier or the issuance of an FDA Form 483 notice or warning letter;
- the possible breach of the manufacturing agreement by the third party;
- the possible misappropriation of Tarveda's proprietary information, including its trade secrets and know how;
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for Tarveda;
- carrier disruptions or increased costs that are beyond Tarveda's control; and
- failure to deliver Tarveda's drugs under specified storage conditions and in a timely manner.

Tarveda has only limited arrangements in place with respect to acquiring and manufacturing necessary for clinical trials, and these arrangements do not extend to commercial supply. Tarveda acquires many key materials on a purchase order basis. As a result, it does not have long-term committed arrangements with respect to its drug candidates and other materials. If Tarveda obtains marketing approval for any of its drug candidates, it will need to establish an agreement for commercial manufacture with a third party.

Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside of the United States. Tarveda's failure, or the failure of its third-party manufacturers and suppliers, to comply with applicable regulations could result in sanctions being imposed on Tarveda, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of drug candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of its products. In addition, Tarveda's third-party manufacturers and suppliers are subject to numerous environmental, health and safety laws and regulations, including those governing the handling, use, storage, treatment and disposal of waste products, and failure to comply with such laws and regulations could result in significant costs associated with civil or criminal fines and penalties for such third parties. Based on the severity of regulatory actions that may be brought against these third parties in the future, Tarveda's clinical or commercial supply of drug and packaging and other services could be interrupted or limited, which could harm its business.

Tarveda's drug candidates and any products that it may develop may compete with other drug candidates and products for access to manufacturing facilities. As a result, Tarveda may not obtain access to these facilities on a priority basis or at all. There are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing for Tarveda.

As Tarveda prepares for later-stage clinical trials and potential commercialization, Tarveda will need to take steps to increase the scale of production of its drug candidates. Tarveda has not yet scaled up the manufacturing process for any of its drug candidates. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in its drug candidates or in the manufacturing facilities in which its drug candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination.

Any performance failure on the part of Tarveda's existing or future manufacturers could delay clinical development or marketing approval. Tarveda does not currently have arrangements in place for redundant supply or a second source for bulk drug substance for PEN-866 or PEN-221. If Tarveda's current contract manufacturers for preclinical and clinical testing cannot perform as agreed, Tarveda may be required to replace such manufacturers. Although Tarveda believes that there are several potential alternative manufacturers who could manufacture its drug candidates, Tarveda may incur added costs and delays in identifying and qualifying any such replacement manufacturer or be able to reach agreement with any alternative manufacturer.

Tarveda's current and anticipated future dependence upon others for the manufacture of its drug candidates or products may adversely affect its future profit margins and ability to commercialize any products that obtain marketing approval on a timely and competitive basis.

Tarveda may enter into collaborations with third parties for the development and commercialization of its drug candidates. If those collaborations are not successful, it may not be able to capitalize on the market potential of these drug candidates.

Tarveda may in the future seek third-party collaborators for the development and commercialization of some of its drug candidates on a selected basis. Tarveda's likely collaborators for any collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. Tarveda faces significant competition in seeking appropriate collaborators. Its ability to reach a definitive agreement for a collaboration will depend, among other things, upon its assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors.

If Tarveda does enter into any such arrangements with any third parties, it will likely have limited control over the amount and timing of resources that such collaborators dedicate to the development or commercialization of its drug candidates. Tarveda's ability to generate revenues from these arrangements will depend on its collaborators' abilities and efforts to successfully perform the functions assigned to them in these arrangements. Collaborations involving Tarveda's drug candidates would pose numerous risks, including the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations and may not perform their obligations as expected;
- collaborators may de-emphasize or not pursue development and commercialization of Tarveda's drug candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus, including as a result of a sale or disposition of a business unit or development function, or available funding or external factors such as an acquisition that diverts resources or creates competing priorities;

- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a drug candidate, repeat or conduct new clinical trials or require a new formulation of a drug candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with Tarveda's products or drug candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- a collaborator with marketing and distribution rights to multiple products may not commit sufficient resources to the marketing and distribution of its product relative to other products;
- collaborators may not properly obtain, maintain, defend or enforce its intellectual property rights or may use Tarveda's proprietary information and intellectual property in such a way as to invite litigation or other intellectual property related proceedings that could jeopardize or invalidate its proprietary information and intellectual property or expose Tarveda to potential litigation or other intellectual property related proceedings;
- disputes may arise between the collaborators and Tarveda that result in the delay or termination of the research, development or commercialization of its products or drug candidates or that result in costly litigation or arbitration that diverts management attention and resources;
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable drug candidates;
- collaboration agreements may not lead to development or commercialization of drug candidates in the most efficient manner or at all; and
- if a collaborator of were to be involved in a business combination, the continued pursuit and emphasis on Tarveda's product development or commercialization program could be delayed, diminished or terminated.

Risks Related to Regulatory Approval and Marketing of Tarveda's Drug Candidates and Other Legal Compliance Matters

The development and commercialization of pharmaceutical products are subject to extensive regulation, and Tarveda may not obtain regulatory approvals for PEN-866, PEN-221 or any other drug candidates, on a timely basis or at all.

The clinical development, manufacturing, labeling, packaging, storage, recordkeeping, advertising, promotion, export, import, marketing, distribution, adverse event reporting, including the submission of safety and other post-marketing information and reports, and other possible activities relating to PEN-866 and PEN-221, currently Tarveda's only drug candidates in clinical trials, as well as any other drug candidate that Tarveda may develop in the future, are subject to extensive regulation. Marketing approval of drugs in the United States requires the submission of a new drug application ("NDA") to the FDA and Tarveda is not permitted to market any drug candidate in the United States until it obtains approval from the FDA of the NDA for that product. An NDA must be supported by extensive clinical and preclinical data, as well as extensive information regarding pharmacology, chemistry, manufacturing and controls.

FDA approval of an NDA is not guaranteed, and the review and approval process is an expensive and uncertain process that may take several years. The FDA also has substantial discretion in the approval process. The number and types of preclinical studies and clinical trials that will be required for NDA approval varies depending on the drug candidate, the disease or the condition that the drug candidate is designed to treat and the regulations applicable to any particular drug candidate. Despite the time and expense associated with preclinical studies and clinical trials, failure can occur at any stage. The results of preclinical and early clinical trials of PEN-866, PEN-221or any other drug candidate may not be predictive of the results of Tarveda's later-stage clinical trials.

Clinical trial failure may result from a multitude of factors including flaws in trial design, dose selection, placebo effect, patient enrollment criteria and failure to demonstrate favorable safety or efficacy traits, and failure in clinical trials can occur at any stage. Companies in the pharmaceutical industry frequently suffer setbacks in the advancement of clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier trials. Based upon negative or inconclusive results, Tarveda may decide, or regulators may require it, to conduct additional clinical trials or preclinical studies. In addition, data obtained from clinical trials are susceptible to varying interpretations, and regulators may not interpret Tarveda's data as favorably as it does, which may further delay, limit or prevent marketing approval.

The FDA could delay, limit or deny approval of a drug candidate for many reasons, including because they:

- may not deem Tarveda's drug candidate to be adequately safe and effective as compared to available therapies;
- may not agree that the data collected from preclinical studies and clinical trials are acceptable or sufficient to support the submission of an NDA or other submission or to obtain regulatory approval, and may impose requirements for additional preclinical studies or clinical trials;
- may determine that adverse events experienced by participants in Tarveda's clinical trials represent an unacceptable level of risk;
- may determine that population studied in the clinical trial may not be sufficiently broad or representative to assure safety in the full population for which Tarveda seeks approval;
- may not accept clinical data from trials that are conducted at clinical facilities or in countries where the standard of care is potentially different from that of the United States;
- may disagree regarding the formulation, labeling and/or the specifications;
- may not approve the manufacturing processes or facilities associated with Tarveda's drug candidate;
- may change approval policies or adopt new regulations; or
- may not accept a submission due to, among other reasons, the content or formatting of the submission.

Generally, public concern regarding the safety of pharmaceutical products could delay or limit Tarveda's ability to obtain regulatory approval, result in the inclusion of unfavorable information in its labeling, or require it to undertake other activities that may entail additional costs. Tarveda has not obtained FDA approval for any product. This lack of experience may impede its ability to obtain FDA approval in a timely manner, if at all, for PEN-866 and PEN-221.

If Tarveda experiences delays in obtaining approval or if it fails to obtain approval of PEN-866, PEN-221 or its other drug candidates, its commercial prospects will be harmed and its ability to generate revenues will be materially impaired which would adversely affect its business, prospects, financial condition and results of operations.

Tarveda's failure to obtain marketing approval in foreign jurisdictions would prevent its drug candidates from being marketed abroad, and any approval it is granted for its drug candidates in the United States would not assure approval of drug candidates in foreign jurisdictions.

In order to market and sell its products in any jurisdiction outside the United States, Tarveda must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the

product can be approved for sale in that country. Tarveda may not obtain approvals from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. Tarveda may not be able to submit for marketing approvals and may not receive necessary approvals to commercialize its products in any market.

Even if Tarveda obtains marketing approval for its drug candidates, the terms of approvals and ongoing regulation of its products may limit how it manufactures and markets its products and compliance with such requirements may involve substantial resources, which could materially impair its ability to generate revenue.

Even if marketing approval of a drug candidate is granted, an approved product and its manufacturer and marketer are subject to ongoing review and extensive regulation, which may include the requirement to implement a REMS or to conduct costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of the product. Tarveda must also comply with requirements concerning advertising and promotion for any of its drug candidates for which it obtains marketing approval. Promotional communications with respect to prescription drugs are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved labeling. Thus, Tarveda will not be able to promote any products it develops for indications or uses for which they are not approved. In addition, manufacturers of approved products and those manufacturers' facilities are required to ensure that quality control and manufacturing procedures conform to cGMPs, which include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation and reporting requirements. Tarveda and its contract manufacturers could be subject to periodic unannounced inspections by the FDA to monitor and ensure compliance with cGMPs.

Accordingly, assuming Tarveda obtains marketing approval for one or more of its drug candidates, it and its contract manufacturers will continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production, product surveillance and quality control. If Tarveda is not able to comply with post-approval regulatory requirements, it could have the marketing approvals for its products withdrawn by regulatory authorities and its ability to market any future products could be limited, which could adversely affect Tarveda's ability to achieve or sustain profitability. As a result, the cost of compliance with post-approval regulations may have a negative effect on Tarveda's operating results and financial condition.

Any drug candidate for which Tarveda obtains marketing approval will be subject to ongoing enforcement of post-marketing requirements and Tarveda could be subject to substantial penalties, including withdrawal of its product from the market, if Tarveda fails to comply with all regulatory requirements or if it experiences unanticipated problems with its products, when and if any of them are approved.

Any drug candidate for which Tarveda obtains marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such product, will be subject to continual requirements of and review by the FDA and other regulatory authorities. These requirements include, but are not limited to, restrictions governing promotion of an approved product, submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, and requirements regarding drug distribution and the distribution of samples to physicians and recordkeeping.

The FDA and other federal and state agencies, including the Department of Justice, closely regulate compliance with all requirements governing prescription drug products, including requirements pertaining to marketing and promotion of drugs in accordance with the provisions of the approved labeling and manufacturing of products in accordance with cGMP requirements. Violations of such requirements may lead to investigations alleging violations of the Food, Drug, and Cosmetic Act ("FDCA"), and other statutes, including the False Claims Act and other federal and state healthcare fraud and abuse laws as well as state consumer protection laws.

Tarveda's failure to comply with all regulatory requirements, and later discovery of previously unknown adverse events or other problems with its products, manufacturers or manufacturing processes, may yield various results, including:

- litigation involving patients taking Tarveda's products;
- restrictions on such products, manufacturers or manufacturing processes;
- restrictions on the labeling or marketing of a product;
- restrictions on product distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning or untitled letters;
- withdrawal of the products from the market;
- refusal to approve pending applications or supplements to approved applications that it submits;
- recall of products;
- significant fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- imprisonment or exclusion from participation in federal healthcare programs;
- damage to relationships with any potential collaborators;
- unfavorable press coverage and damage to Tarveda's reputation;
- refusal to permit the import or export of its products;
- product seizure; and/or
- injunctions or the imposition of significant civil, administrative or criminal penalties.

Non-compliance by Tarveda or any future collaborator with regulatory requirements, including safety monitoring or pharmacovigilance, can also result in significant financial penalties.

Tarveda's relationships with customers and third-party payors will be subject to applicable anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose it to criminal sanctions, civil penalties, contractual damages, reputational harm and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors will play a primary role in the recommendation and prescription of any drug candidates for which Tarveda obtains marketing approval. Tarveda's current and future arrangements with healthcare providers, third-party payors and customers may expose it to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which it conducts research, markets, sells and distributes any products for which it obtains marketing approval. Restrictions under applicable federal and state healthcare laws and regulations, include the following:

- the federal Anti-Kickback Statute prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program such as Medicare and Medicaid;
- the federal civil and criminal false claims laws, including the False Claims Act, which can be enforced by civil whistleblower or qui tam actions on behalf of the government, and the civil monetary penalties

law, prohibit individuals or entities from, among other things, knowingly presenting, or causing to be presented false or fraudulent claims for payment by a federal government program, or making a false statement or record material to payment of a false claim or avoiding, decreasing or concealing an obligation to pay money to the federal government;

- the federal Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH") and their implementing regulations, impose criminal and civil liability for executing a scheme to defraud any healthcare benefit program and also impose obligations, including mandatory contractual terms, on certain healthcare providers, health plans, and healthcare clearinghouses, as well as their respective "business associates" that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- the federal false statements statute prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services;
- the federal transparency requirements under the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively, the "ACA"), requires certain manufacturers of drugs, devices, biologics and medical supplies to report to the CMS information related to physician payments and other transfers of value and ownership and investment interests held by physicians and their immediate family members; and
- analogous state laws and regulations such as state anti-kickback and false claims laws and analogous non-U.S. fraud and abuse laws and regulations, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance regulations promulgated by the federal government and may require drug manufacturers to report information related to drug pricing. State and local laws require manufacturers to report information related to transfers of value to physicians and other healthcare providers, marketing expenditures and require the registration of pharmaceutical sales representatives. State and non-U.S. laws that also govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Efforts to ensure that Tarveda's business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that its business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If Tarveda's operations are found to be in violation of any of these laws or any other governmental regulations that may apply to it, Tarveda may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from government funded healthcare programs, such as Medicare and Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, additional integrity reporting and oversight obligations, and the curtailment or restructuring of its operations, any of which could adversely affect its ability to operate its business and its results of operations. If any of the physicians or other healthcare providers or entities with whom Tarveda expects to do business is found to be not in compliance with applicable laws, they may be subject to significant criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs, which could have a material adverse effect on Tarveda's business, results of operations, financial condition and prospects.

Recently enacted and future legislation may increase the difficulty and cost for Tarveda to obtain marketing approval of and commercialize its drug candidates and decrease the prices it may obtain.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of Tarveda's drug candidates, restrict or regulate post-approval activities and affect its ability to profitably sell any drug candidates for which it obtains marketing approval.

In the United States, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 ("MMA") changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly and introduced a new reimbursement methodology based on average sales prices for physician- administered drugs. In addition, this legislation provided authority for limiting the number of drugs that will be covered in any therapeutic class. Cost reduction initiatives and other provisions of this legislation could decrease the coverage and price that Tarveda receives for any approved products. While the MMA applies only to drug benefits for Medicare beneficiaries, private third-party payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates. Therefore, any reduction in reimbursement that results from the MMA may result in a similar reduction in payments from private third-party payors.

In March 2010, the ACA was signed into law and substantially changed the way healthcare is financed by both governmental and private insurers, and continues to significantly impact the U.S. pharmaceutical industry. The ACA is a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

Among the provisions of the ACA of importance to Tarveda's potential drug candidates are the following:

- annual fees and taxes on manufacturers of certain branded prescription drugs;
- an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic products;
- a new Medicare Part D coverage gap discount program, in which manufacturers must now agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the federal Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;
- extension of manufacturers' Medicaid rebate liability;
- expansion of eligibility criteria for Medicaid programs;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- requirements to report financial arrangements with physicians and teaching hospitals;
- a requirement to annually report drug samples that manufacturers and distributors provide to physicians; and

- a Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

Some of the provisions of the ACA have yet to be fully implemented, while certain provisions have been subject to judicial and Congressional challenges as well as recent efforts by the current U.S. President's administration to repeal or replace certain aspects of the ACA. Since January 2017, the current U.S. President has signed two Executive Orders and other directives designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, it has enacted laws that modify certain provisions of the ACA such as removing penalties, starting January 1, 2019, for not complying with the ACA's individual mandate to carry health insurance, delaying the implementation of certain ACA-mandated fees, and increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D. On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Cuts and Jobs Act (the "Tax Act") the remaining provisions of the ACA are invalid as well. While the Texas district court judge, as well as the current U.S. President's administration and CMS, have stated that the ruling will have no immediate effect, it is unclear how this decision, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA and Tarveda's business.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. On August 2, 2011, the Budget Control Act of 2011 was signed into law, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals for spending reductions. The Joint Select Committee did not achieve a targeted deficit reduction, triggering the legislation's automatic reduction to several government programs. These changes include aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013, and due to subsequent legislative amendments to the statute, will remain in effect through 2029 unless additional Congressional action is taken. In January 2013, the American Taxpayer Relief Act of 2012 (the "ATRA") was signed into law, which, among other things, reduced Medicare payments to several providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These laws may result in additional reductions in Medicare and other healthcare funding.

Further, there has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. For example, the current U.S. President's administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. In addition, the current U.S. President's administration's budget proposal for fiscal year 2020 contains further drug price control measures that could be enacted during the budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage Plans the option of using step therapy for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. Although some of these and other measures may require additional authorization to become effective, Congress and the current U.S. President's administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. In addition, at the state level, legislatures have increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and

marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Additionally, on May 30, 2018, the Trickett Wendler, Frank Mongiello, Jordan McLinn, and Matthew Bellina Right to Try Act of 2017 (the Right to Try Act) was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase I clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a pharmaceutical manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act.

Tarveda expects that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that it receives for any approved product. The implementation of cost containment measures or other healthcare reforms may prevent Tarveda from being able to generate revenue, attain profitability, or commercialize its products.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. Tarveda cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of its drug candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject Tarveda to more stringent product labeling and post-marketing testing and other requirements.

Governments outside of the United States tend to impose strict price controls, which may adversely affect Tarveda's revenues, if any.

In some countries, particularly the countries of the European Union (the "EU"), the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, Tarveda may be required to conduct a clinical trial that compares the cost-effectiveness of its drug candidate to other available therapies. If reimbursement of Tarveda's products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, its business could be harmed. In addition, the recent United Kingdom referendum on its membership in the European Union resulted in a majority of United Kingdom voters voting to exit the European Union, often referred to as Brexit. Brexit could lead to legal uncertainty and potentially divergent national laws and regulations, including those related to the pricing of prescription pharmaceuticals, as the United Kingdom determines which EU laws to replicate or replace. If the United Kingdom were to significantly alter its regulations affecting the pricing of prescription pharmaceuticals, Tarveda could face significant new costs. In addition, Tarveda has filed a CTA to conduct a Phase 1 clinical trial of PEN-221 in the United Kingdom. It is unclear what the effects of Brexit will be on the successful conduct of such clinical trial, and how Brexit may affect the acceptability and use of the results of such clinical trial in the European Union. As a result, Brexit could impair Tarveda's ability to transact business in the European Union and the United Kingdom, as well as its conduct of its Phase 1/2a clinical trial of PEN-221.

Laws and regulations governing any international operations Tarveda may have in the future may preclude it from developing, manufacturing and selling certain drug candidates and products outside of the United States and require Tarveda to develop and implement costly compliance programs.

If Tarveda expands its operations outside of the United States, it must dedicate additional resources to comply with numerous laws and regulations in each jurisdiction in which it plans to operate. The Foreign Corrupt Practices Act (the "FCPA") prohibits any U.S. individual or business from paying, offering, authorizing payment or offering anything of value, directly or indirectly, to any foreign official, political party or candidate for the

purpose of influencing any act or decision of such third party in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with certain accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the company, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Compliance with the FCPA is expensive and difficult, particularly in countries in which corruption is a recognized problem. In addition, the FCPA presents particular challenges in the pharmaceutical industry, because, in many countries, hospitals are operated by the government, and doctors and other hospital employees are considered foreign officials. Certain payments to hospitals in connection with clinical trials and other work have been deemed to be improper payments to government officials and have led to FCPA enforcement actions.

Various laws, regulations and executive orders also restrict the use and dissemination outside of the United States, or the sharing with certain non-U.S. nationals, of information classified for national security purposes, as well as certain products and technical data relating to those products. If Tarveda expands its presence outside of the United States, it will require Tarveda to dedicate additional resources to comply with these laws, and these laws may preclude it from developing, manufacturing or selling certain drug candidates and products outside of the United States, which could limit its growth potential and increase its development costs.

The failure to comply with laws governing international business practices may result in substantial civil and criminal penalties and suspension or debarment from government contracting. The Securities and Exchange Commission also may suspend or bar issuers from trading securities on U.S. exchanges for violations of the FCPA's accounting provisions.

If Tarveda fails to comply with environmental, health and safety laws and regulations, it could become subject to fines or penalties or incur costs that could harm its business.

Tarveda is subject to numerous foreign, federal, state and local environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Tarveda's operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Tarveda's operations also produce hazardous waste products. Tarveda generally contracts with third parties for the disposal of these materials and wastes. Tarveda cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from its use of hazardous materials, Tarveda could be held liable for any resulting damages, and any liability could exceed its resources, including any available insurance.

In addition, Tarveda's leasing and operation of real property may subject it to liability pursuant to certain of these laws or regulations. Under existing U.S. environmental laws and regulations, current or previous owners or operators of real property and entities that disposed or arranged for the disposal of hazardous substances may be held strictly, jointly and severally liable for the cost of investigating or remediating contamination caused by hazardous substance releases, even if they did not know of and were not responsible for the releases.

Tarveda could incur significant costs and liabilities which may adversely affect its financial condition and operating results for failure to comply with such laws and regulations, including, among other things, civil or criminal fines and penalties, property damage and personal injury claims, costs associated with upgrades to its facilities or changes to its operating procedures, or injunctions limiting or altering its operations.

Although Tarveda maintains workers' compensation insurance to cover it for costs and expenses it may incur due to injuries to its employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. Tarveda does not maintain insurance for environmental liability or toxic tort claims that may be asserted against it in connection with its storage or disposal of biological, hazardous or radioactive materials.

In addition, Tarveda may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations, which are becoming increasingly more stringent, may impair its research, development or production efforts. Tarveda's failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Tarveda is subject to certain U.S. and certain foreign anti-corruption, anti-money laundering, export control, sanctions and other trade laws and regulations. Tarveda can face serious consequences for violations.

U.S. and foreign anti-corruption, anti-money laundering, export control, sanctions and other trade laws and regulations prohibit, among other things, companies and their employees, agents, CROs, legal counsel, accountants, consultants, contractors and other partners from authorizing, promising, offering, providing, soliciting, or receiving directly or indirectly, corrupt or improper payments or anything else of value to or from recipients in the public or private sector. Violations of these laws can result in substantial criminal fines and civil penalties, imprisonment, the loss of trade privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences. Tarveda has direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities and other organizations. Tarveda also expects its non-U.S. activities to increase over time. Tarveda expects to rely on third parties for research, preclinical studies and clinical trials and/or to obtain necessary permits, licenses, patent registrations and other marketing approvals. Tarveda can be held liable for the corrupt or other illegal activities of its personnel, agents, or partners, even if it does not explicitly authorize or have prior knowledge of such activities.

Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm and other consequences.

Risks Related to Tarveda's Intellectual Property

If Tarveda is unable to obtain and maintain sufficient patent protection for its drug candidates and platform technologies, or if the scope of the patent protection is not sufficiently broad, third parties, including its competitors, could develop and commercialize products similar or identical to Tarveda's, and its ability to commercialize its drug candidates successfully may be adversely affected.

Tarveda's commercial success depends significantly on its ability to protect its proprietary technologies that it believes are important to Tarveda's business, including pursuing, obtaining and maintaining patent protection in the United States and other countries intended to cover the composition of matter of its drug candidates, for example, PEN-866 and PEN-221, the methods of use, related technologies, for example, its HSP90 binding miniature drug conjugate platform and *Pentarin* development technologies, and other inventions that are important to its business. In addition to patent protection, Tarveda also relies on trade secrets to protect aspects of its business that are not amenable to, or that it does not consider appropriate for, patent protection. If Tarveda does not adequately pursue, obtain, maintain, protect or enforce its intellectual property, third parties, including its competitors and/or collaborators, may be able to erode or negate any competitive advantage Tarveda may have, which could harm its business and ability to achieve profitability.

To protect its proprietary position, Tarveda files patent applications in the United States and abroad related to its drug candidates, their methods of manufacture and use. Tarveda also seeks to protect its HSP90 binding miniature drug conjugate platform and *Pentarin* discovery efforts that it considers important to its business. The patent application and approval process is expensive, time-consuming and complex. Tarveda may not be able to prepare, file, prosecute and maintain all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions. It is also possible that Tarveda will fail to identify patentable aspects of its research and development output before it is too late to obtain patent protection. Moreover, depending on the terms of any future license agreements to which it may become a party, Tarveda may not have the right to control the preparation, filing, and prosecution of patent applications, or to maintain or defend the patents, covering technology licensed from third parties. Therefore, these patents and patent applications may not be prosecuted and enforced in a manner consistent with the best interests of its business.

Furthermore, the patent position of biotechnology and pharmaceutical companies generally is highly uncertain. No consistent policy regarding the breadth of claims allowed in biotechnology and pharmaceutical patents has emerged to date in the United States or in many foreign jurisdictions. The standards applied by the USPTO and foreign patent offices in granting patents are not always applied uniformly or predictably. In addition, the determination of patent rights with respect to biological and pharmaceutical products commonly involves complex legal and factual questions, which have in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of Tarveda's patent rights are highly uncertain. Thus, it cannot offer any assurances about which, if any, patents will issue, the breadth of any such patents, whether any issued patents will be found invalid and unenforceable or will be threatened by third parties or whether any issued patents will effectively prevent others from commercializing competing technologies and drug candidates. While Tarveda has filed many patent applications covering aspects of its drug candidates and platform technologies, it currently has or has in-licensed 26 issued patents and six soon-to-be-issued patents. Tarveda has not filed its patent applications in every jurisdiction, and some filings are only pending in the United States.

Tarveda's pending patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until at least one patent issues from such applications. Assuming the other requirements for patentability are met, currently, the first to file a patent application is generally entitled to the patent. However, prior to March 16, 2013, in the United States, the first to invent was entitled to the patent. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Because patent applications in the United States and most other countries are confidential for a period of time after filing, and some remain so until issued, Tarveda cannot be certain that it was the first to file or invent (prior to March 16, 2013) any patent application related to its drug candidates and HSP90 binding miniature drug conjugate platform and *Pentarin* know-how. In addition, Tarveda enters into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of its research and development output, such as its employees, collaborators, CROs, contract manufacturers, hospitals, independent treatment centers, consultants, independent contractors, suppliers, advisors and other third parties; however, any of these parties may breach the agreements and disclose such output before a patent application is filed, thereby jeopardizing Tarveda's ability to seek patent protection. Furthermore, if third parties have filed patent applications related to Tarveda's drug candidates or technology, it may not be able to obtain its own patent rights to those drug candidates or technology.

Moreover, because the issuance of a patent, although presumptive, is not conclusive as to its inventorship, scope, validity or enforceability, Tarveda's patents or pending patent applications may be challenged in the courts or patent offices in the United States and abroad. For example, Tarveda may be subject to a third-party pre-issuance submission of prior art to the USPTO or become involved in post-grant review procedures, oppositions, derivations, revocation, reexaminations, *inter partes* review or interference proceedings, in the United States or elsewhere, challenging its patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, Tarveda's patent rights, allow third parties to commercialize its technology or products and compete directly with Tarveda, without payment to Tarveda, or result in an inability to manufacture or commercialize products without infringing third-party rights. Moreover, Tarveda may have to participate in interference proceedings declared by the USPTO to determine priority of invention or in post-grant challenge proceedings, such as oppositions in a foreign patent office, that challenge priority of invention or other features of patentability. Such challenges may result in loss of exclusivity or in Tarveda's patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit its ability to stop others from using or commercializing similar or identical technology and products or limit the duration of the patent protection of its technology and products. Such challenges also may result in substantial cost and require significant time from Tarveda's scientists and management, even if the eventual outcome is favorable to it. Any of the foregoing could have a material adverse effect on Tarveda's business, financial condition, results of operations, and prospects.

In addition, given the amount of time required for the development, testing and regulatory review of new drug candidates, Tarveda's patents protecting such drug candidates might expire before or shortly after such drug candidates are commercialized. As a result, Tarveda's intellectual property may not provide it with sufficient rights to exclude others from commercializing products similar or identical to its products. Moreover, some of Tarveda's patents and patent applications may in the future be co-owned with third parties. If Tarveda is unable to obtain an exclusive license to any such third-party co-owners' interest in such patents or patent applications, such co-owners may be able to license their rights to other third parties, including Tarveda's competitors, and its competitors could market competing products and technology. In addition, Tarveda may need the cooperation of any such co-owners of its patents in order to enforce such patents against third parties, and such cooperation may not be provided to Tarveda. Any of the foregoing could have a material adverse effect on Tarveda's competitive position, business, financial conditions, results of operations, and prospects.

Tarveda's pending and future patent applications may not result in patents being issued that protect its drug candidates, in whole or in part, or that effectively prevent others from commercializing competitive products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of Tarveda's patents or narrow the scope of its patent protection. In addition, the laws of foreign countries may not protect its rights to the same extent or in the same manner as the laws of the United States. For example, European patent law restricts the patentability of methods of treatment of the human body more than U.S. law does.

Even if Tarveda's patent applications issue as patents, they may not issue in a form that will provide it with any meaningful protection, prevent competitors or other third parties from competing with it or otherwise provide Tarveda with any competitive advantage. Moreover, the coverage claimed in a patent application can be significantly reduced before the patent is issued and its scope can be reinterpreted after issuance. Consequently, Tarveda does not know whether any of its drug candidates or platform technologies will be protectable or remain protected by valid and enforceable patents. Tarveda's competitors and other third parties may be able to circumvent its patents by developing similar or alternative technologies or products in a non-infringing manner. Tarveda's competitors and other third parties may also seek approval to market their own products similar to or otherwise competitive with its products. Alternatively, Tarveda's competitors or other third parties may seek to market generic versions of any approved products by submitting abbreviated NDAs to the FDA during which process they may claim that patents owned by Tarveda are invalid, unenforceable or not infringed. In these circumstances, Tarveda may need to defend or assert its patents, or both, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or other agency with jurisdiction may find Tarveda's patents invalid or unenforceable, or that its competitors are competing in a non-infringing manner. Thus, even if Tarveda has valid and enforceable patents, these patents still may not provide protection against competing products or processes sufficient to achieve its business objectives. Any of the foregoing could have a material adverse effect on Tarveda's competitive position, business, financial conditions, results of operations, and prospects.

Furthermore, future patents may be subject to a reservation of rights by one or more third parties. For example, to the extent the research resulting in future patent rights or technologies is funded in the future in part by the U.S. government, the government could have certain rights in any resulting patents and technology, including a non-exclusive license authorizing the government to use the invention or to have others use the invention on its behalf for non-commercial purposes. If the U.S. government then decides to exercise these rights, it is not required to engage Tarveda as its contractor in connection with doing so. These rights may also permit the government to disclose Tarveda's confidential information to third parties and to exercise march-in rights to use or allow third parties to use its licensed technology. The government may also exercise its march-in rights if it determines that action is necessary because Tarveda failed to achieve practical application of the government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, Tarveda's rights in such government-funded inventions may be subject to certain requirements to manufacture products embodying such

inventions in the United States. Any exercise by the government of aforementioned proprietary rights could harm Tarveda's competitive position, business, financial condition, results of operations, and prospects.

Changes to the patent law in the United States and other jurisdictions could diminish the value of patents in general, thereby impairing Tarveda's ability to protect its products.

As is the case with other pharmaceutical companies, Tarveda's success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the pharmaceutical industry involves both technological and legal complexity and is therefore costly, time consuming and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. Recent patent reform legislation in the United States and other countries, including the Leahy-Smith America Invents Act (the Leahy-Smith Act) signed into law in September 2011, could increase those uncertainties and costs. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. For example, the Leahy-Smith Act allows third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, and derivation proceedings. In addition, the Leahy-Smith Act has transformed the U.S. patent system from a "first-to-invent" system to a "first-to-file" system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. The first-to-file provisions, however, only became effective on March 16, 2013. Accordingly, it is not yet clear what, if any, impact the Leahy-Smith Act will have on the operation of Tarveda's business. However, the Leahy-Smith Act and its implementation could make it more difficult to obtain patent protection for Tarveda's inventions and increase the uncertainties and costs surrounding the prosecution of its or its collaboration partners' patent applications and the enforcement or defense of or collaboration partners' issued patents, all of which could harm Tarveda's business, results of operations, financial condition and prospects.

In addition, the patent positions of companies in the development and commercialization of biologics and pharmaceuticals are particularly uncertain. The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. This combination of events has created uncertainty with respect to the validity and enforceability of patents, once obtained. Additionally, there have been recent proposals for additional changes to the patent laws of the United States and other countries that, if adopted, could impact Tarveda's ability to enforce its proprietary technology. Depending on future actions by the U.S. Congress, the U.S. courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that could have a material adverse effect on Tarveda's existing patent portfolio and weaken its ability to obtain new patents or to enforce its existing patents and patents that it might obtain in the future.

Tarveda may become involved in lawsuits or administrative disputes to protect or enforce its patents or other intellectual property, which could be expensive, time consuming and unsuccessful.

Competitors and other third parties may infringe, misappropriate or otherwise violate Tarveda's patents, trademarks, copyrights, trade secrets or other intellectual property. To counter infringement, misappropriation or other violations, Tarveda may be required to file infringement, misappropriation or other violation claims, which can be expensive and time consuming and divert the time and attention of its management and business and scientific personnel. In addition, many of Tarveda's adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than it can.

Any claims Tarveda asserts against perceived infringers could provoke these parties to assert counterclaims against Tarveda alleging that it infringes, misappropriates or otherwise violates their patents or their other

intellectual property, in addition to counterclaims asserting that Tarveda's patents are invalid or unenforceable, or both. In patent litigation in the United States, counterclaims challenging the validity, enforceability or scope of asserted patents are commonplace. Similarly, third parties may initiate or threaten legal proceedings against Tarveda seeking a declaration that certain of its intellectual property is non-infringed, invalid or unenforceable. The outcome of any such proceeding is generally unpredictable. Given the costs involved to litigate, Tarveda may decide to settle rather than dispute such claims if it is more economical to do so. For example, in 2017, Tarveda received a demand letter allenging potential trademark infringement. Rather than engage in a costly dispute, Tarveda agreed to certain modifications of how it uses its corporate name to resolve the issue.

In any patent infringement proceeding, there is a risk that a court will decide that a patent is invalid or unenforceable, in whole or in part, and that Tarveda does not have the right to stop the other party from using the invention at issue. There is also a risk that, even if the validity of such patents is upheld, the court will construe the patent's claims narrowly or decide that Tarveda does not have the right to stop the other party from using the invention at issue on the grounds that its patent claims do not cover the invention. An adverse outcome in a litigation or proceeding involving Tarveda's patents could limit its ability to assert its patents against those parties or other competitors, and may curtail or preclude its ability to exclude third parties from making and selling similar or competitive products. If a defendant were to prevail on a legal assertion of invalidity or unenforceability of Tarveda's patents covering one of its drug candidates, Tarveda could lose at least a part, and perhaps all, of the patent protection covering such a drug candidate. Competing drugs may also be sold in other countries in which its patent coverage might not exist or be as strong. If Tarveda loses a foreign patent lawsuit alleging its infringement of a competitor's patents, Tarveda could be prevented from marketing its drugs in one or more foreign countries. Any of these occurrences could adversely affect its competitive business position, business prospects and financial condition. Similarly, if Tarveda asserts trademark infringement claims, a court may determine that the marks Tarveda has asserted are invalid or unenforceable, or that the party against whom it has asserted trademark infringement has superior rights to the marks in question. In this case, Tarveda could ultimately be forced to cease use of such trademarks.

Even if Tarveda establishes infringement, the court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may or may not be an adequate remedy. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of Tarveda's confidential information could be compromised by disclosure during litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If these results are perceived to be negative, it could have a material adverse effect on your investement. Moreover, there can be no assurance that Tarveda will have sufficient financial or other resources to file and pursue such infringement claims, which typically last for years before they are concluded. Even if Tarveda ultimately prevails in such claims, the monetary cost of such litigation and the diversion of the attention of management and scientific personnel could outweigh any benefit it receives as a result of the proceedings.

Furthermore, third parties may also raise invalidity or unenforceability claims before administrative bodies in the United States or foreign authorities, even outside the context of litigation. Such mechanisms include re-examination, *inter partes* review, post-grant review, interference proceedings, derivation proceedings and equivalent proceedings in foreign jurisdictions (*e.g.*, opposition proceedings). Such proceedings could result in revocation, cancellation or amendment to Tarveda's patents in such a way that they no longer cover and protect its drug candidates or platform technologies. The outcome following legal assertions of invalidity and unenforceability is unpredictable. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, non-enablement or written description. Grounds for an unenforceability assertion could be an allegation that someone connected with the prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution of the patent. With respect to the validity of Tarveda's patents, for example, it cannot be certain that there is no invalidating prior art of which Tarveda, its licensors, patent counsel and the patent examiner were unaware during prosecution. Moreover, it is possible that prior art may exist that it is aware of but does not believe is

relevant to its current or future patents, but that could nevertheless be determined to render its patents invalid. If a third party were to prevail on a legal assertion of invalidity or unenforceability, Tarveda could lose at least part, and perhaps all, of the patent protection on one or more of its drug candidates. Any such loss of patent protection could have a material adverse impact on Tarveda's business, financial condition, results of operations and prospects.

Tarveda may not be able to effectively enforce its intellectual property and proprietary rights throughout the world.

Filing, prosecuting and defending patents with respect to its drug candidates in all countries throughout the world would be prohibitively expensive, and the laws of foreign countries may not protect Tarveda's rights to the same extent as the laws of the United States. The requirements for patentability may differ in certain countries, particularly in developing countries. In addition, any future intellectual property license agreements may not always include worldwide rights. Consequently, competitors and other third parties may use Tarveda's technologies in jurisdictions where it has not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where Tarveda may obtain patent protection, but where patent enforcement is not as strong as that in the United States and where its ability to enforce patents to stop infringing activities may be inadequate. These products may compete with Tarveda's products in such territories and in jurisdictions where it does not have any patent rights or where any future patent claims or other intellectual property or proprietary rights may not be effective or sufficient to prevent them from competing with Tarveda, which could have a material adverse effect on its business, financial condition, results of operations and prospects.

Moreover, Tarveda's ability to protect and enforce its intellectual property and proprietary rights may be adversely affected by unforeseen changes in foreign intellectual property laws. Additionally, the laws of some countries outside of the United States and Europe do not afford intellectual property protection to the same extent as the laws of the United States and Europe. Many companies have encountered significant problems in protecting and defending intellectual property and proprietary rights in certain foreign jurisdictions. The legal systems of some countries, including, for example, India, China and other developing countries, do not favor the enforcement of patents and other intellectual property or proprietary rights, particularly those relating to biotechnology products, which could make it difficult for Tarveda to stop the infringement, misappropriation or other violation of its patents or other intellectual property or proprietary rights. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. Consequently, Tarveda may not be able to prevent third parties from practicing its inventions in certain countries outside the United States and Europe. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If Tarveda is forced to grant a license to third parties with respect to any patents relevant to its business, its competitive position may be impaired, and its business, financial condition, results of operations, and prospects may be adversely affected. Proceedings to enforce Tarveda's intellectual property and proprietary rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert efforts and resources from other aspects of its business, could put its patents, trademarks or other intellectual property and proprietary rights at risk of being invalidated or interpreted narrowly, could put its patent applications at risk of not issuing, and could provoke third parties to assert claims against it. Tarveda may not prevail in any lawsuits that it initiates, and the damages or other remedies awarded, if any, may not be commercially meaningful. Furthermore, while Tarveda intends to protect its intellectual property and proprietary rights in major markets for its products, it cannot ensure that it will be able to initiate or maintain similar efforts in all jurisdictions in which it may wish to market its products. Accordingly, Tarveda's efforts to protect its intellectual property and proprietary rights in such countries may be inadequate.

If Tarveda is sued for infringing, misappropriating or otherwise violating intellectual property or proprietary rights of third parties, such litigation or disputes could be costly and time consuming and could prevent or delay it from developing or commercializing its drug candidates.

Tarveda's commercial success depends, in part, on its ability to develop, manufacture, market and sell its drug candidates and use its proprietary platform and other technologies without infringing, misappropriating or otherwise violating the intellectual property and other proprietary rights of third parties. If any third-party patents, patent applications or other proprietary rights are found to cover Tarveda's drug candidates or their compositions, methods of use or manufacturing, Tarveda may be required to pay damages, which could be substantial, and Tarveda would not be free to manufacture or market its drug candidates or to do so without obtaining a license, which may not be available on commercially reasonable terms, or at all.

Tarveda may in the future become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property or proprietary rights with respect to its drug candidates and platform and other technologies it uses in its business. Tarveda's competitors or other third parties may assert infringement claims, alleging that Tarveda's drug candidates or platform or other technologies are covered by their patents. Tarveda cannot be certain that it does not infringe existing patents or that it will not infringe patents that may be granted in the future. Furthermore, because patent applications can take many years to issue and may be confidential for 18 months or more after filing, and because patent claims can be revised before issuance, there may be applications now pending that may later result in issued patents that may be infringed by the manufacture, use or sale of its drug candidates. If a patent holder believes Tarveda's drug candidate or technology infringes its patent rights, the patent holder may sue even if Tarveda has received patent protection for its technology. Moreover, Tarveda may face patent infringement claims from non-practicing entities that have no relevant drug revenue and against whom its own patent portfolio may thus have no deterrent effect.

There is a substantial amount of intellectual property litigation in the biotechnology and pharmaceutical industries, and Tarveda may become party to, or threatened with, litigation or other adversarial proceedings regarding intellectual property or proprietary rights with respect to its drug candidates and platform technologies, including interference proceedings before the USPTO. Third parties may assert infringement, misappropriation or other claims against Tarveda based on existing or future intellectual property or proprietary rights. The outcome of intellectual property litigation and other disputes is subject to uncertainties that cannot be adequately quantified in advance. The pharmaceutical and biotechnology industries have produced a significant number of patents, and it may not always be clear to industry participants, including Tarveda, which patents cover various types of products or methods of using or manufacturing products. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If Tarveda were sued for patent infringement, Tarveda would need to demonstrate that its drug candidates, products or methods of use, manufacturing or other applicable activities either do not infringe the patent claims of the relevant patent or that the patent claims are invalid or unenforceable, and Tarveda may not be successful in doing so. However, proving invalidity or unenforceability is difficult. For example, in the United States, proving invalidity requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Even if Tarveda believes third-party intellectual property claims are without merit, there is no assurance that a court would find in Tarveda's favor on questions of infringement, validity, or enforceability. Even if Tarveda is successful in these proceedings, it may incur substantial costs and the time and attention of management and business and scientific personnel could be diverted in pursuing these proceedings, which could significantly harm its business and operating results. In addition, Tarveda may not have sufficient resources to bring these actions to a successful conclusion.

If Tarveda is found to infringe, misappropriate or otherwise violate a third party's intellectual property or proprietary rights and is unsuccessful in demonstrating that such intellectual property or proprietary rights are invalid or unenforceable, Tarveda could be forced, including by court order, to cease developing, manufacturing or commercializing the infringing drug candidate or product. Alternatively, Tarveda may be required to obtain a license from such third party in order to use the infringing technology and continue developing, manufacturing or

marketing the infringing drug candidate. However, Tarveda may not be able to obtain any required license on commercially reasonable terms or at all. Even if Tarveda were able to obtain such a license, it could be granted on non-exclusive terms, thereby giving its competitors and other third parties access to the same technologies licensed to it. In addition, Tarveda could be found liable for significant monetary damages, including treble damages and attorneys' fees if it is found to have willfully infringed such third-party patent rights. A finding of infringement could prevent Tarveda from commercializing its drug candidates or force it to cease some of its business operations, which could materially harm its business. Claims that Tarveda has misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on its business, financial condition, results of operations and prospects.

Tarveda may be subject to claims by third parties asserting that its employees or consultants or it has misappropriated their intellectual property, or claiming ownership of what Tarveda regards as its own intellectual property.

Some of Tarveda's employees and consultants are currently or have been previously employed at universities or at other biotechnology or pharmaceutical companies, including its competitors or potential competitors. These employees and consultants may have executed proprietary rights, non-disclosure and non-competition agreements, or similar agreements, in connection with such other current or previous employment. Although Tarveda tries to ensure that its employees and consultants do not use the proprietary information or know-how of others in their work for it, Tarveda may be subject to claims that it or these individuals have used or disclosed intellectual property, including trade secrets or other proprietary information, of third parties. Litigation may be necessary to defend against such claims. If Tarveda fails in defending any such claims, in addition to paying monetary damages, Tarveda may lose valuable intellectual property or personnel or sustain damages. Such intellectual property could be awarded to a third party, and Tarveda could be required to obtain a license from such third party to commercialize its technology or products. Such a license may not be available on commercially reasonable terms or at all. Even if Tarveda is successful in defending against such claims, litigation could result in substantial costs and be a distraction to management. Any of the foregoing would have a material adverse effect on Tarveda's business, financial condition, results of operations and prospects.

In addition, while it is Tarveda's policy to require its employees, consultants and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to it, Tarveda may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that it regards as its own, which may result in claims by or against Tarveda related to the ownership of such intellectual property. In addition, such agreements may not be self-executing such that the intellectual property subject to such agreements may not be assigned to Tarveda without additional assignments being executed, and Tarveda may fail to obtain such assignments. In addition, such agreements may be breached. Accordingly, Tarveda may be forced to bring claims against third parties, or defend claims that they may bring against it to determine the ownership of what it regards as its intellectual property. If Tarveda fails in prosecuting or defending any such claims, in addition to paying monetary damages, Tarveda may lose valuable intellectual property. Even if Tarveda is successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to its senior management and scientific personnel, which would have a material adverse effect on its business, financial condition, results of operations and prospects.

Rights to improvements to Tarveda's drug candidates may be held by third parties.

In the course of testing its drug candidates, Tarveda has entered into agreements with third parties to conduct preclinical and clinical testing, which provide that improvements to its drug candidates may be owned solely by a party or jointly between the parties. If Tarveda determines that rights to such improvements owned solely by a third party are necessary to commercialize its drug candidates or maintain its competitive advantage, Tarveda may need to obtain a license from such third party in order to use the improvements and continue

developing, manufacturing or marketing the drug candidates. However, Tarveda may not be able to obtain any required license on commercially reasonable terms or at all. Even if Tarveda were able to obtain such a license, it could be granted on non-exclusive terms, thereby giving its competitors and other third parties access to the same technologies licensed to it. Failure to obtain a license on commercially reasonable terms or at all, or to obtain an exclusive license, could prevent Tarveda from commercializing its drug candidates or force it to cease some of its business operations, which could materially harm its business. If Tarveda determines that rights to improvements jointly owned between Tarveda and a third party are necessary to commercialize its drug candidates or maintain its competitive advantage, Tarveda may need to obtain an exclusive license from such third party. If Tarveda ise unable to obtain an exclusive license to any such third-party co-owners' interest in such improvements, such co-owners may be able to license their rights to other third parties, including its competitors, and Tarveda's competitors could market competing products and technology. In addition, Tarveda may need the cooperation of any such co-owners of its intellectual property in order to enforce such intellectual property against third parties, and such cooperation may not be provided. Any of the foregoing could have a material adverse effect on Tarveda's competitive position, business, financial conditions, results of operations, and prospects.

The term of Tarveda's patents may be inadequate to protect its competitive position on its products.

Given the amount of time required for the development, testing and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. Depending upon the timing, duration and other factors relating to any FDA marketing approval Tarveda receives for any of its drug candidates, one or more of its U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Action of 1984 (commonly referred to as the Hatch-Waxman Amendments). Tarveda expects to seek extensions of patent terms in the United States and, if available, in other countries where it is prosecuting patents. In the United States, the Hatch-Waxman Amendments permit a patent term extension of up to five years beyond the normal expiration of the patent, limited to the approved indication (or any additional indications approved during the period of extension), as compensation for patent term lost during the regulatory review process. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, only one patent applicable to an approved drug is eligible for the extension and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended, and the application for the extension must be submitted prior to the expiration of the patent. However, the applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with Tarveda's assessment of whether such extensions are available for its patents, may refuse to grant extensions to its patents, or may grant more limited extensions than Tarveda requests. Tarveda may not be granted an extension because of, for example, failing to exercise due diligence during the testing phase or regulatory review process, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents, or otherwise failing to satisfy applicable requirements. If Tarveda is unable to obtain patent term extension or the term of any such extension is less than it requests, its competitors and other third parties may be able to obtain approval of competing products following patent expiration and take advantage of Tarveda's investment in development and clinical trials by referencing its clinical and preclinical data and launch their product earlier than might otherwise be the case. Any of the foregoing would have a material adverse effect on Tarveda's business, financial condition, results of operations and prospects.

Obtaining and maintaining patent protection depends on compliance with various procedural, documentary, fee payment and other requirements imposed by governmental patent offices, and Tarveda's patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other government fees on any issued patent are due to be paid to the USPTO and patent offices in foreign countries in several stages over the lifetime of the patent. The USPTO and patent offices in foreign countries require compliance with a number of procedural, documentary, fee payment and other requirements during the patent application process. In the future, Tarveda may rely on licensing partners to pay these fees due to U.S. and non-U.S. patent agencies and to

comply with these other requirements with respect to any future licensed patents and patent applications. While an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of a patent or patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, Tarveda's competitors and other third parties might be able to enter the market with similar or identical products of technology, which would have a material adverse effect on its business, financial condition, results of operations and prospects.

If Tarveda is unable to protect the confidentiality of its trade secrets, the value of its technology could be materially adversely affected and its business would be harmed.

While Tarveda has obtained composition of matter patents with respect to both of its clinical *Pentarin* miniature drug conjugates PEN-866 and PEN-221, it also relies on proprietary know-how and trade secret protection and confidentiality agreements to protect proprietary know-how or trade secrets that are not patentable or that it elects not to patent. Tarveda seeks to protect its proprietary know-how in part by entering into non-disclosure and confidentiality agreements with parties who have access to such knowledge, such as its employees, consultants, independent contractors, advisors, contract manufacturers, CROs, hospitals, independent treatment centers, suppliers, collaborators and other third parties. Tarveda also enters into confidentiality and invention or patent assignment agreements with employees and certain consultants. However, Tarveda cannot guarantee that it has entered into such agreements with each party that may have or have had access to its trade secrets or proprietary know-how. Additionally, Tarveda's confidentiality agreements and other contractual protections may not be adequate to protect its intellectual property from unauthorized disclosure, third-party infringement or misappropriation. Any party with whom it has executed such an agreement may breach that agreement and disclose Tarveda's proprietary information, including its trade secrets, and Tarveda may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts in the United States and certain foreign jurisdictions are less willing or unwilling to protect trade secrets. If any of Tarveda's trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, Tarveda would have no right to prevent such third party, or those to whom they communicate such technology or information, from using that technology or information to compete with Tarveda. If any of Tarveda's trade secrets were to be disclosed to or independently developed by a competitor or other third party, its business, financial condition, results of operations and prospects and competitive position could be materially harmed.

Intellectual property rights do not necessarily address all potential threats.

The degree of future protection afforded by Tarveda's intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect its business or permit it to maintain its competitive advantage. For example:

- others may be able to make products similar to any drug candidates Tarveda may develop or utilize similarly related technologies that are not covered by the claims of the patents that Tarveda may license or may own in the future;
- Tarveda, or any future license partners or current or future collaborators, might not have been the first to make the inventions covered by the issued patent or pending patent application that it licenses or may own in the future;
- Tarveda, or any future license partners or current or future collaborators, might not have been the first to file patent applications covering certain of its or their inventions;

- others may independently develop similar or alternative technologies or duplicate any of Tarveda's technologies without infringing, misappropriating or otherwise violating any of its owned or licensed intellectual property rights;
- it is possible that Tarveda's pending patent applications or those that it may own in the future will not lead to issued patents;
- issued patents that Tarveda holds rights to may be held invalid or unenforceable, including as a result of legal challenges by its competitors or other third parties;
- its competitors or other third parties might conduct research and development activities in countries where Tarveda does not have patent rights and then use the information learned from such activities to develop competitive products for sale in its major commercial markets;
- Tarveda may not develop additional proprietary technologies that are patentable;
- the patents of others may harm Tarveda's business; and
- Tarveda may choose not to file a patent in order to maintain certain trade secrets or know how, and a third party may subsequently file a patent covering such intellectual property.

Should any of these events occur, they could have a material adverse effect on Tarveda's business, financial condition, results of operations and prospects.

Risks Related to the Commercialization of Tarveda's Drug Candidates

The incidence and prevalence for target patient populations of Tarveda's drug candidates have not been established with precision. If the market opportunities for its drug candidates are smaller than it estimates or if any approval that Tarveda obtains is based on a narrower definition of the patient population, its revenue potential and ability to achieve profitability will be adversely affected.

The total addressable market opportunity for PEN-866, PEN-221 and any other drug candidates Tarveda may develop will ultimately depend upon, among other things, the diagnosis criteria included in the final label for each such drug candidate if its drug candidates are approved for sale for these indications, acceptance by the medical community and patient access, drug pricing and their reimbursement. The number of patients in Tarveda's targeted commercial markets and elsewhere may turn out to be lower than expected, patients may not be otherwise amenable to treatment with its drugs, or new patients may become increasingly difficult to identify or gain access to, all of which would adversely affect its results of operations and its business.

Even if any of Tarveda's drug candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If any of Tarveda's drug candidates receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. For example, current cancer treatments, such as existing targeted therapies, chemotherapy, and radiation therapy, are well established in the medical community, and doctors may continue to rely on these treatments. If Tarveda's drug candidates do not achieve an adequate level of acceptance, Tarveda may not generate significant product revenues and it may not become profitable. The degree of market acceptance of its drug candidates, if approved for commercial sale, will depend on a number of factors, including:

- the efficacy and potential advantages compared to alternative treatments;
- the prevalence and severity of any side effects, in particular compared to alternative treatments;
- limitations or warnings contained in the labeling approved for Tarveda's drug candidates by the FDA;
- the size of the target patient population;

- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- Tarveda's ability to offer its products for sale at competitive prices;
- the convenience and ease of administration compared to alternative treatments;
- the strength of marketing and distribution support;
- publicity for Tarveda's drug candidates and competing products and treatments;
- the existence of distribution and/or use restrictions, such as through a REMS;
- the availability of third-party payor coverage and adequate reimbursement and the willingness of patients to pay for Tarveda's products in the absence of such coverage and adequate reimbursement;
- the timing of any marketing approval in relation to other product approvals;
- support from patient advocacy groups; and
- any restrictions on the use of Tarveda's products together with other medications.

Tarveda currently has no marketing and sales organization and has no experience as a company in commercializing products and may have to invest significant resources to develop these capabilities. If Tarveda is unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell its products, it may not be able to generate revenue.

Tarveda does not have a sales or marketing infrastructure and has no experience in the sale, marketing or distribution of pharmaceutical products. To achieve commercial success for any product for which it obtains marketing approval, Tarveda will need to establish sales, marketing and distribution capabilities, either itself or through collaboration or other arrangements with third parties.

There are risks involved with establishing its own sales and marketing capabilities. For example, recruiting and training a sales force is expensive and time-consuming and could delay any product launch. If the commercial launch of a drug candidate for which Tarveda recruits a sales force and establishes marketing capabilities is delayed or does not occur for any reason, it would have prematurely or unnecessarily incurred these commercialization expenses. These efforts are expected to be costly, and any investment would be lost if Tarveda cannot retain or reposition its sales and marketing personnel.

Factors that may inhibit Tarveda's efforts to commercialize its products on its own include:

- an inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- an inability to raise financing necessary to build its commercialization infrastructure;
- the inability of sales personnel to obtain access to physicians or educate an adequate number of physicians as to the benefits of Tarveda's products;
- unfavorable third-party payor coverage and reimbursement in any geography;
- the lack of complementary products to be offered by sales personnel, which may put Tarveda at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

As a result of any potential partnerships in markets outside of the United States, or if Tarveda is unable to establish its own sales and marketing capabilities in the United States and instead enter into arrangements with third parties to perform these services, Tarveda's product revenues and profitability, if any, are likely to be lower

than if it were to market and sell any products that it develops. In addition, Tarveda may not be successful in entering into arrangements with third parties to market and sell its drug candidates or may be unable to do so on terms that are acceptable to it. Tarveda likely will have little control over such third parties, and any of these third parties may fail to devote the necessary resources and attention to sell and market its products effectively. If Tarveda does not establish sales and marketing capabilities successfully, either on its own or in collaboration with third parties, Tarveda will not be successful in commercializing any of its drug candidates for which it receives marketing approval.

Tarveda faces substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than it.

The development and commercialization of pharmaceutical products is highly competitive. Tarveda faces competition with respect to its current drug candidates, its *Pentarin* miniature drug conjugate platform, including its HSP90 binding technology, and will face competition with respect to any drug candidates that it may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. There are a number of large pharmaceutical and biotechnology companies that currently market and sell products or are pursuing the development of products for the treatment of the disease indications for which Tarveda is developing its drug candidates and other platform technologies that may be effective in developing therapeutics. Some of these competitive products, therapies and technologies are based on scientific approaches that are similar to Tarveda's approach, and others are based on entirely different approaches. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization.

Tarveda expects that its product candidates and its *Pentarin* miniature drug conjugate platform, including its HSP90 binding miniature drug conjugate platform will face competition from traditional small or large molecule drugs that target specific cancers that are FDA-approved and marketed for the indications that Tarveda is pursuing, in addition to off-label use of current therapeutics and therapeutics in development; other drug conjugates using targeted approaches to direct payloads to cancerous tumors, such as ADCs; as well as newer approaches, such as immuno-oncology, which attempts to harness the patient's own immune system to fight cancer itself.

Many of the companies against which Tarveda is competing or against which it may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining marketing approvals and marketing and selling approved products than it does. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of its competitors. Smaller and other early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with Tarveda in recruiting and retaining qualified scientific, management and sales and marketing personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, its programs.

Tarveda's commercial opportunity could be reduced or eliminated if its competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are approved for broader indications or patient populations, are more convenient or are less expensive than any products that it may develop. Tarveda's competitors also may obtain FDA or other marketing approval for their products more rapidly than any approval it may obtain, which could result in its competitors establishing a strong market position before Tarveda is able to enter the market. In addition, Tarveda's ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic products. The key competitive factors affecting the success of PEN-866 and PEN-221 are likely to be efficacy, safety, scope and limitations of marketing approval, and availability of reimbursement.

Even if Tarveda is able to commercialize any drug candidates, the products may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, which would harm its business.

The regulations that govern marketing approvals, pricing, coverage and reimbursement for new drug products vary widely from country to country. Current and future legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. To obtain reimbursement or pricing approval in some countries, Tarveda may be required to conduct a clinical trial that compares the cost-effectiveness of its drug candidate to other available therapies. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, Tarveda might obtain marketing approval for a drug candidate in a particular country, but then be subject to price regulations that delay commercial launch of the product, possibly for lengthy time periods, and negatively impact the revenues, if any, it is able to generate from the sale of the product in that country. Adverse pricing limitations may hinder Tarveda's ability to recoup its investment in one or more drug candidates, even if such drug candidates obtain marketing approval.

Tarveda's ability to commercialize any drug candidates successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from third-party payors, including government healthcare programs, private health insurers and other organizations. Third-party payors decide which medications they will pay for and establish reimbursement levels. A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. Coverage and reimbursement may not be available for any product that Tarveda commercializes and, even if these are available, the level of reimbursement may not be satisfactory. Reimbursement may affect the demand for, or the price of, any drug candidate for which it obtains marketing approval. Obtaining and maintaining coverage and adequate reimbursement for its products may be difficult. Tarveda may be required to conduct expensive pharmacoeconomic studies to justify coverage and reimbursement or the level of reimbursement relative to other therapies. If coverage and adequate reimbursement are not available or reimbursement is available only to limited levels, Tarveda may not be able to successfully commercialize any drug candidate for which it obtains marketing approval.

There may also be significant delays in obtaining coverage and reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA or similar regulatory authorities outside of the United States. Moreover, eligibility for coverage and reimbursement does not imply that a drug will be paid for in all cases or at a rate that covers Tarveda's costs, including research, development, intellectual property, manufacture, sale and distribution expenses. Interim reimbursement levels for new drugs, if applicable, may also not be sufficient to cover Tarveda's costs and may not be made permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies, but also have their own methods and approval process apart from Medicare determinations. Tarveda's inability to promptly obtain coverage and adequate reimbursement rates from third-party payors for any approved products that it develops could have a material adverse effect on its operating results, ability to raise capital needed to commercialize products and overall financial condition.

In addition, diagnostic tests, such as the screening tests that are used to identify SSTR2 expression, require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion

pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, apply to diagnostics.

Product liability lawsuits against Tarveda could cause it to incur substantial liabilities and to limit commercialization of any products that it may develop.

Tarveda faces an inherent risk of product liability exposure related to the testing of its drug candidates in human clinical trials and will face an even greater risk if it commercializes any products that it may develop. If Tarveda cannot successfully defend itself against any claims that its drug candidates or products caused injuries, it will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any drug candidates or products that it may develop;
- injury to its reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards to trial participants or patients;
- loss of revenue;
- reduced resources of management to pursue its business strategy; and
- the inability to commercialize any products that Tarveda may develop.

Tarveda's current product liability insurance coverage for the United States and certain other jurisdictions may not be adequate to cover all liabilities that it may incur. Tarveda likely will need to increase its insurance coverage as it expands its clinical trials or if it commences commercialization of its drug candidates. Insurance coverage is increasingly expensive. Tarveda may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Risks Related to Employee Matters, Managing Growth and Other Risks Related to Tarveda's Business

Tarveda's future success depends on its ability to retain key employees and to attract, retain and motivate qualified personnel.

Tarveda is highly dependent on Andrew Fromkin, its President, Chief Executive Officer and Chairman, and the clinical development and scientific expertise of Jeffrey Bloss, M.D., its Chief Medical Officer, and Mark Bilodeau, Ph.D., its Chief Scientific Officer, as well as the other principal members of its management, scientific and clinical team. Although Tarveda has entered into employment agreements with its executive officers, each of them may terminate their employment with Tarveda at any time.

Tarveda's industry has experienced a high rate of turnover in recent years. Its ability to compete in the highly competitive pharmaceuticals industry depends upon its ability to attract, retain and motivate highly skilled and experienced personnel with scientific, clinical, regulatory, manufacturing and management skills and experience. Tarveda conducts its operations in the greater Boston area, a region that is home to many other pharmaceutical companies as well as many academic and research institutions, resulting in fierce competition for qualified personnel. Tarveda may not be able to attract or retain qualified personnel in the future due to the intense competition for a limited number of qualified personnel among pharmaceutical companies. Many of the other pharmaceutical companies against which it competes have greater financial and other resources, different risk profiles and a longer history in the industry than it does. Tarveda's competitors may provide higher compensation, more diverse opportunities and/or better opportunities for career advancement. Any or all of these competing factors may limit its ability to continue to attract and retain high quality personnel, which could negatively affect its ability to successfully develop and commercialize its drug candidates and to grow its business and operations as currently contemplated.

Tarveda expects that it will need to expand its development and regulatory capabilities as its product candidates progress through the clinic, or additional product candidates are developed; if any products are approved, Tarveda would have to implement sales, marketing and distribution capabilities, and as a result, it may encounter difficulties in managing growth, which could disrupt its operations.

As of December 31, 2019, Tarveda had 29 full-time employees. Tarveda expects to experience growth in the number of employees and the scope of its operations, particularly in the areas of clinical development, clinical operations, manufacturing, regulatory affairs as it progresses its PEN-866 and PEN-221 through the clinic and develops additional product candidates. If any of Tarveda's drug candidates receives marketing approval, Tarveda would potentially need to expand into sales, marketing and distribution. To manage anticipated future growth, Tarveda must continue to implement and improve its managerial, operational and financial systems, expand its facilities and continue to recruit and train additional qualified personnel. Tarveda may not be able to effectively manage the expansion of its operations or recruit and train additional qualified personnel. The expansion of Tarveda's operations may lead to significant costs and may divert management and business development resources.

Further, Tarveda currently relies, and for the foreseeable future will continue to rely, in substantial part on certain third-party contract organizations, advisors and consultants to provide certain services, including assuming substantial responsibilities for the conduct of its clinical trials and the manufacture of PEN-866 and PEN-221 or any of its other current or future drug candidates. Tarveda cannot assure you that the services of such third-party contract organizations, advisors and consultants will continue to be available to it on a timely basis when needed, or that it can find qualified replacements. In addition, if Tarveda is unable to effectively manage its outsourced activities or if the quality or accuracy of the services provided by its vendors or consultants is compromised for any reason, its clinical trials may be extended, delayed or terminated, and Tarveda may not be able to obtain marketing approval of PEN-866 or PEN-221 or any of its other current or future drug candidates or otherwise advance its business. Tarveda cannot assure you that it will be able to properly manage its existing vendors or consultants or find other competent outside vendors and consultants on economically reasonable terms, or at all.

If Tarveda is not able to effectively manage growth and expand its organization, it may not be able to successfully implement the tasks necessary to further develop and commercialize PEN-866 or PEN-221, or any other drug candidates and, accordingly, may not achieve its research, development and commercialization goals.

Tarveda's employees, clinical trial investigators, CROs, consultants, vendors and any potential commercial partners may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

Tarveda is exposed to the risk of fraud or other misconduct by its employees, clinical trial investigators, CROs, consultants, vendors and any potential commercial partners. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to it that violates: (i) FDA regulations or those of comparable foreign regulatory authorities, including those laws that require the reporting of true, complete and accurate information, (ii) manufacturing standards, (iii) federal and state health and data privacy, security, fraud and abuse, government price reporting, transparency reporting requirements, and other healthcare laws and regulations in the United States and abroad, (iv) sexual harassment and other workplace misconduct, or (v) laws that require the true, complete and accurate reporting of financial information or data. Such misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and cause serious harm to Tarveda's reputation. Tarveda maintains a written code of business conduct and ethics that applies to its directors, officers and employees, including its principal executive officer, principal financial officer, principal accounting officer or controller, or person performing similar functions, as well as a disclosure program and other applicable policies and procedures, but it is not always possible to identify and deter employee misconduct, and the precautions it takes to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting

Tarveda from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against Tarveda, and it is not successful in defending itself or asserting its rights, those actions could have a significant impact on its business, including the imposition of significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from government funded healthcare programs, such as Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, additional integrity reporting and oversight obligations, and the curtailment or restructuring of its operations, any of which could adversely affect its ability to operate its business and its results of operations.

Tarveda's internal information technology systems, or those of its third-party CROs or other vendors, contractors or consultants, may fail or suffer security breaches, loss or leakage of data and other disruptions, which could result in a material disruption of its development programs, compromise sensitive information related to its business or prevent it from accessing critical information, potentially exposing it to liability or otherwise adversely affecting its business.

Tarveda is increasingly dependent upon information technology systems, infrastructure and data to operate its business. In the ordinary course of business, Tarveda collects, stores and transmits confidential information (including but not limited to intellectual property, proprietary business information and personal information). It is critical that Tarveda does so in a secure manner to maintain the confidentiality and integrity of such confidential information. Tarveda also has outsourced elements of its operations to third parties, and as a result it manages a number of third-party CROs, vendors, and other contractors and consultants who have access to its confidential information.

Despite the implementation of security measures, given their size and complexity and the increasing amounts of confidential information that they maintain, Tarveda's internal information technology systems and those of its third-party CROs, vendors and other contractors and consultants are potentially vulnerable to breakdown or other damage or interruption from service interruptions, system malfunction, natural disasters, terrorism, war and telecommunication and electrical failures, as well as security breaches from inadvertent or intentional actions by its employees, third-party CROs, vendors, contractors, consultants, business partners and/or other third parties, or from cyber-attacks by malicious third parties (including the deployment of harmful malware, ransomware, denial-of-service attacks, social engineering and other means to affect service reliability and threaten the confidentiality, integrity and availability of information), which may compromise Tarveda's system infrastructure, or that of its third-party CROs, vendors and other contractors and consultants, or lead to data leakage. The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. Tarveda may not be able to anticipate all types of security threats, nor may it be able to implement preventive measures effective against all such security threats. The techniques used by cyber criminals change frequently, may not be recognized until launched and can originate from a wide variety of sources, including outside groups such as external service providers, organized crime affiliates, terrorist organizations or hostile foreign governments or agencies. To the extent that any disruption or security breach were to result in a loss of, or damage to, its data or applications, or those of its third-party CROs, vendors and other contractors and consultants, or inappropriate disclosure of confidential or proprietary information, Tarveda could incur liability and reputational damage and the further development and commercialization of PEN-866, PEN-221 or any other drug candidates could be delayed. The costs related to significant security breaches or disruptions could be material and exceed the limits of the cybersecurity insurance Tarveda maintains against such risks. If the information technology systems of its third-party CROs, vendors and other contractors and consultants become subject to disruptions or security breaches, Tarveda may have insufficient recourse against such third parties and it may have to expend significant resources to mitigate the impact of such an event, and to develop and implement protections to prevent future events of this nature from occurring.

While Tarveda has not experienced any such system failure, accident or security breach to date, and believes that its data protection efforts and investment in information technology reduce the likelihood of such incidents

in the future, it cannot assure you that its data protection efforts and investment in information technology will prevent significant breakdowns, data leakages, breaches in its systems, or those of its third-party CROs, vendors and other contractors and consultants, or other cyber incidents that could have a material adverse effect upon its reputation, business, operations or financial condition. For example, if such an event were to occur and cause interruptions in Tarveda's operations, or those of its third-party CROs, vendors and other contractors and consultants, it could result in a material disruption of its programs and the development of its drug candidates could be delayed. In addition, the loss of clinical trial data for PEN-866, PEN-221, or any other drug candidates could result in delays in Tarveda's marketing approval efforts and significantly increase its costs to recover or reproduce the data. Furthermore, significant disruptions of its internal information technology systems or those of third-party CROs, vendors and other contractors and consultants, or security breaches could result in the loss, misappropriation and/or unauthorized access, use, or disclosure of, or the prevention of access to, confidential information (including trade secrets or other intellectual property, proprietary business information and personal information), which could result in financial, legal, business and reputational harm to Tarveda. For example, any such event that leads to unauthorized access, use, or disclosure of personal information, including personal information regarding Tarveda's clinical trial subjects or employees, could harm its reputation directly, compel it to comply with federal and/or state breach notification laws and foreign law equivalents, subject it to mandatory corrective action, and otherwise subject it to liability under laws and regulations that protect the privacy and security of personal information, which could result in significant legal and financial exposure and reputational damages that could potentially have an adverse effect on its business.

Failure to comply with health and data protection laws and regulations could lead to government enforcement actions (which could include civil or criminal penalties), private litigation and/or adverse publicity and could negatively affect Tarveda's operating results and business.

Tarveda and any potential collaborators may be subject to federal, state and foreign data protection laws and regulations (*i.e.*, laws and regulations that address privacy and data security). In the United States, numerous federal and state laws and regulations, including federal health information privacy laws, state data breach notification laws, state health information privacy laws and federal and state consumer protection laws (*e.g.*, Section 5 of the Federal Trade Commission Act), that govern the collection, use, disclosure and protection of health-related and other personal information could apply to Tarveda's operations or the operations of its collaborators. In addition, it may obtain health information from third parties (including research institutions from which it obtains clinical trial data) that are subject to privacy and security requirements under the HIPAA, as amended by HITECH. Depending on the facts and circumstances, Tarveda could be subject to criminal penalties if it knowingly obtains, uses, or discloses individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

International data protection laws, including Regulation 2016/679, known as the General Data Protection Regulation (the "GDPR"), may also apply to health-related and other personal information obtained outside of the United States. The GDPR went into effect on May 25, 2018. The GDPR introduced new data protection requirements in the European Union, as well as potential fines for noncompliant companies of up to the greater of €20 million or 4% of annual global revenue. The regulation imposes numerous new requirements for the collection, use and disclosure of personal information, including more stringent requirements relating to consent and the information that must be shared with data subjects about how their personal information is used, the obligation to notify regulators and affected individuals of personal data breaches, extensive new internal privacy governance obligations and obligations to honor expanded rights of individuals in relation to their personal information (*e.g.*, the right to access, correct and delete their data). In addition, the GDPR includes restrictions on cross-border data transfer. The GDPR will increase Tarveda's responsibility and liability in relation to personal data that it processes, and it may be required to put in place additional mechanisms to ensure compliance with the new EU data protection rules. Further, Brexit has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is unclear whether the United Kingdom will enact data protection legislation equivalent to the GDPR and how data transfers to and from the United Kingdom will be regulated.

In addition, California recently enacted the California Consumer Privacy Act (the "CCPA"), which creates new individual privacy rights for California consumers (as defined in the law) and places increased privacy and security obligations on entities handling certain personal data of consumers or households. The CCPA will require covered companies to provide new disclosure to consumers about such companies' data collection, use and sharing practices, provide such consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. The CCPA goes into effect on January 1, 2020, and the California Attorney General may bring enforcement actions for violations beginning July 1, 2020. The CCPA was amended on September 23, 2018, and it remains unclear what, if any, further modifications will be made to this legislation or how it will be interpreted. As currently written, the CCPA may impact Tarveda's business activities and exemplifies the vulnerability of its business to the evolving regulatory environment related to personal data and protected health information.

Compliance with U.S. and international data protection laws and regulations could require Tarveda to take on more onerous obligations in its contracts, restrict its ability to collect, use and disclose data, or in some cases, impact its ability to operate in certain jurisdictions. Failure to comply with U.S. and international data protection laws and regulations could result in government enforcement actions (which could include civil, criminal, and administrative penalties), private litigation and/or adverse publicity and could negatively affect its operating results and business. Moreover, clinical trial subjects about whom Tarveda or its potential collaborators obtain information, as well as the providers who share this information with it, may contractually limit Tarveda's ability to use and disclose the information. Claims that Tarveda has violated individuals' privacy rights, failed to comply with data protection laws, or breached its contractual obligations, even if it is not found liable, could be expensive and time consuming to defend and could result in adverse publicity that could harm its business.

Tarveda or the third parties upon whom it depends may be adversely affected by natural disasters and its business continuity and disaster recovery plans may not adequately protect it from a serious disaster.

Although Tarveda is located in the greater Boston area, it is still subject to risks posed by natural disasters, including severe weather that may interfere with its operations. Extreme weather events and other natural disasters could severely disrupt its operations, and have a material adverse effect on its business, results of operations, financial condition and prospects. If a natural disaster, power outage or other event occurred that prevented Tarveda from using all or a significant portion of its headquarters, that damaged critical infrastructure, such as the manufacturing facilities of its third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for Tarveda to continue its business for a substantial period of time. Any disaster recovery and business continuity plans Tarveda has in place may prove inadequate in the event of a serious disaster or similar event. Tarveda may incur substantial expenses as a result of the limited nature of its disaster recovery and business continuity plans, which, could have a material adverse effect on its business.

Tarveda's ability to use NOL carryforwards and other tax attributes may be limited in connection with the Merger and other ownership changes.

Tarveda has incurred substantial losses during its history and does not expect to become profitable in the near future, and Tarveda may never achieve profitability. To the extent that Tarveda continues to generate taxable losses, unused losses will carry forward to offset future taxable income, if any, until such unused losses expire (if at all). At March 31, 2019, Tarveda had federal and state NOL carryforwards of approximately $93.5 million and $93.1 million, respectively. Approximately $54.1 million of such federal and state NOL carryforwards will begin to expire in 2031, unless previously utilized and $39.4 million of which may be carried forward indefinitely but are subject to the 80% limitation discussed below. At March 31, 2019, Tarveda had federal and state research and development credit carryforwards of approximately $3.0 million and $1.2 million, respectively. The federal research and development credit carryforwards will begin expiring in 2028, unless previously utilized.

Under the Tax Act, federal NOLs generated in taxable years ending after December 31, 2017, may be carried forward indefinitely but federal NOLs generated in taxable years beginning after December 31, 2017 may only be used to offset 80% of Tarveda's taxable income annually. Tarveda's NOL carryforwards are subject to review and possible adjustment by the IRS and state tax authorities. Under Sections 382 and 383 of the Code, Tarveda's federal NOL and research and development tax credit carryforwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant stockholders over a three-year period in excess of 50 percentage points. Tarveda's ability to utilize its NOL carryforwards and other tax attributes to offset future taxable income or tax liabilities may be limited as a result of ownership changes, including in connection with the Merger. Similar rules may apply under state tax laws. Tarveda has not yet determined the amount of the cumulative change in its ownership resulting from the Merger or other transactions, or any resulting limitations on its ability to utilize its NOL carryforwards and other tax attributes. If Tarveda earns taxable income, such limitations could result in increased future tax liability to Tarveda and its future cash flows could be adversely affected. Tarveda has recorded a full valuation allowance related to its NOLs and other deferred tax assets due to the uncertainty of the ultimate realization of the future benefits of those assets.

U.S. tax legislation may materially adversely affect Tarveda's financial condition, results of operations and cash flows.

The Tax Act has significantly changed the U.S. federal income taxation of U.S. corporations, including by reducing the U.S. corporate income tax rate and revising the rules governing NOLs. Many of these changes became effective beginning in 2018, without any transition periods or grandfathering for existing transactions. The legislation is unclear in many respects and could be subject to potential amendments and technical corrections, as well as interpretations and implementing regulations by the U.S. Treasury Department and the IRS, any of which could lessen or increase certain adverse impacts of the legislation. In addition, it is unclear how these U.S. federal income tax changes will affect state and local taxation, which often uses federal taxable income as a starting point for computing state and local tax liabilities. During 2017, Tarveda recorded tax charges for the impact of the Tax Act effects using the current available information and technical guidance on the interpretations of the Tax Act. As permitted by SEC Staff Accounting Bulletin 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act, Tarveda recorded provisional estimates and has subsequently finalized its accounting analysis based on the guidance, interpretations, and data available as of March 31, 2018. Adjustments made in 2018 upon finalization of the accounting analysis were not material to Tarveda's financial statements.

Tarveda may engage in strategic transactions that could impact liquidity, increase expenses and present significant distractions to management.

From time to time, Tarveda may consider strategic transactions, such as acquisitions of companies, businesses or assets and out-licensing or in-licensing of products, drug candidates or technologies. Additional potential transactions that it may consider include a variety of different business arrangements, including spin-offs, strategic partnerships, joint ventures, restructurings, divestitures, business combinations and investments. Any such transaction may require it to incur non-recurring or other charges, may increase near term or long-term expenditures and may pose significant integration challenges or disrupt management or business, which could adversely affect Tarveda's operations and financial results. For example, these transactions may entail numerous operational and financial risks, including:

- exposure to unknown liabilities;
- disruption of business and diversion of management's time and attention in order to develop acquired products, drug candidates or technologies;
- incurrence of substantial debt or dilutive issuances of equity securities to pay for acquisitions;
- higher than expected acquisition and integration costs;
- write-downs of assets or goodwill or impairment charges;

- increased amortization expenses;
- difficulty and cost in combining the operations, systems and personnel of any acquired businesses with its operations, systems and personnel;
- impairment of relationships with key suppliers or customers of any acquired businesses due to changes in management and ownership; and
- inability to retain key employees of any acquired businesses.

Risks Related to Ownership of Tarveda's Common Stock

Tarveda's financial condition and results of operations may fluctuate from quarter to quarter and year to year, which makes them difficult to predict.

Tarveda expects its financial condition and results of operations to fluctuate from quarter to quarter and year to year due to a variety of factors, many of which are beyond Tarveda's control. Accordingly, you should not rely upon the results of any quarterly or annual periods as indications of future operating performance.

Concentration of ownership of Tarveda's common stock among its existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Tarveda's executive officers, directors and stockholders who own more than 5% of its outstanding common stock beneficially own a significant percentage of its outstanding common stock. If these persons acted together, they may be able to significantly influence all matters requiring stockholder approval, including the election and removal of directors, consolidation or sale of all or substantially all of its assets, or approval of any merger, including the Merger that is the subject of this joint proxy statement/prospectus/information statement. The concentration of voting power and transfer restrictions could delay or prevent an acquisition of Tarveda's company on terms that other stockholders may desire or result in the management of its company in ways with which other stockholders disagree.

As a public company, Tarveda will be subject to more stringent federal and state law requirements.

Tarveda currently operates as a private company. Following completion of the Merger, as it is deemed the acquiror for accounting purposes, Tarveda will effectively become a public company for accounting purposes. As a public company, Tarveda will be subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Sarbanes-Oxley Act, the Dodd–Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), the listing requirements of Nasdaq and other applicable securities rules and regulations. Despite reforms made possible by the JOBS Act, compliance with these rules and regulations will nonetheless increase Tarveda's legal and financial compliance costs, make some activities more difficult, time-consuming or costly and increase demand on its systems and resources.

As a result of disclosure of information in this Registration Statement and in filings required of a public company, Tarveda's business and financial condition will become more visible, which it believes may result in threatened or actual litigation, including by competitors and other third parties. If such claims are successful, Tarveda's business, results of operations, financial condition and prospects could be harmed, and even if the claims do not result in litigation or are resolved in its favor, these claims, and the time and resources necessary to resolve them, could divert the resources of its management and adversely affect its brand and reputation, business, results of operations, financial condition and prospects.

Tarveda also expects that being a public company and the associated rules and regulations will make it more expensive for it to obtain director and officer liability insurance, and it may be required to accept reduced coverage or incur substantially higher costs to obtain adequate coverage. These factors could also make it more difficult for Tarveda to attract and retain qualified members of its board of directors, particularly to serve on its audit committee and compensation committee, and qualified executive officers.

Tarveda, deemed the acquiror for accounting purposes in the Merger, will incur significant increased costs as a result of operating as a public company, and management of the combined will be required to devote substantial time to new compliance initiatives.

Tarveda currently operates as a private company. Following completion of the Merger, as it is deemed the acquiror for accounting purposes, Tarveda will effectively become a public company for accounting purposes, and as a result, Tarveda will incur significant legal, accounting, investor relations and other expenses that it did not incur as a private company. In addition, the Sarbanes-Oxley Act and rules subsequently implemented by the SEC and Nasdaq have imposed various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Stockholder activism, the current political environment and the current high level of U.S. government intervention and regulatory reform may also lead to substantial new regulations and disclosure obligations, which may in turn lead to additional compliance costs and impact the manner in which Tarveda operate its business in ways it does not currently anticipate. Management and other personnel of the combined organization will need to devote a substantial amount of time to comply with these requirements. Moreover, these requirements will increase its legal and financial compliance costs and will make some activities more time-consuming and costly. For example, Tarveda expects that these rules and regulations may make it more difficult and more expensive for it to obtain director and officer liability insurance. Tarveda cannot predict or estimate the amount or timing of additional costs it may incur to respond to these requirements.

If Tarveda fails to maintain proper and effective internal control over financial reporting, its ability to produce accurate and timely financial statements could be impaired, investors may lose confidence in its financial reporting and the trading price of its common stock may decline.

Pursuant to Section 404, following completion of the Merger, the report by management on internal control over financial reporting will be on Tarveda's financial reporting and internal controls (as accounting acquiror), and if it is not a non-accelerated filer, an attestation of the independent registered public accounting firm will also be required. The rules governing the standards that must be met for management to assess internal control over financial reporting are complex and require significant documentation, testing and possible remediation. To comply with the Sarbanes-Oxley Act, the requirements of being a reporting company under the Exchange Act and any complex accounting rules in the future, the combined organization may need to upgrade Tarveda's legacy information technology systems; implement additional financial and management controls, reporting systems and procedures; and hire additional accounting and finance staff. Tarveda is currently in the process of expanding its accounting and finance capabilities as it grows its business and prepares to become a public company through the Merger. If Tarveda is unable to hire the additional accounting and finance staff necessary to comply with these requirements, it may need to retain additional outside consultants. If Tarveda or, if required, its auditors, are unable to conclude that its internal control over financial reporting is effective, investors may lose confidence in its financial reporting, which could negatively impact the price of its securities.

Tarveda cannot assure you that there will not be material weaknesses in its internal control over financial reporting now or in the future. Tarveda has not previously been required to conduct such an internal control evaluation and assessment. Any failure to maintain internal control over financial reporting could severely inhibit Tarveda's ability to accurately report its financial condition, results of operations or cash flows. If Tarveda is unable to conclude that its internal control over financial reporting is effective, or if its independent registered public accounting firm determines that Tarveda has a material weakness in its internal control over financial reporting, investors may lose confidence in the accuracy and completeness of its financial reports, the market price of its common stock could decline, and it could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities. Failure to remedy any material weakness in Tarveda's internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict its future access to the capital markets.

Tarveda's reported financial results may be adversely affected by changes in accounting principles generally accepted in the United States.

GAAP in the United States are subject to interpretation by the Financial Accounting Standards Board ("FASB") or the SEC, and various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on Tarveda's reported financial results, may retroactively affect previously reported results, could cause unexpected financial reporting fluctuations and may require it to make costly changes to its operational processes and accounting systems.

Risks Related to the Combined Organization

In determining whether you should approve the Merger, the issuance of shares of Organovo common stock and other matters related to the Merger, as the case may be, you should carefully read the following risk factors in addition to the risks described under "Risk Factors — Risks Related to the Merger," "Risk Factors — Risks Related to the Proposed Organovo Reverse Stock Split," "Risk Factors — Risks Related to Organovo" and "Risk Factors — Risks Related to Tarveda," which will also apply to the combined organization.

The combined organization's stock price is expected to be volatile, and the market price of its common stock may drop following the Merger.

The market price of the combined organization's common stock following the Merger could be subject to significant fluctuations following the Merger. Market prices for securities of healthcare and other life sciences companies have historically been particularly volatile. Some of the factors that may cause the market price of the combined organization's common stock to fluctuate include:

- a slowdown in the healthcare industry or the general economy;
- inability to obtain adequate supply of the components for any of the combined organization's products, or inability to do so at acceptable prices;
- performance of third parties on whom the combined organization may rely, including for the manufacture of the components for its product, including their ability to comply with regulatory requirements;
- the results of the combined organization's current and any future clinical trials of its product candidates;
- unanticipated or serious safety concerns related to the use of any of the combined organization's products;
- the entry into, or termination of, key agreements, including key commercial partner agreements;
- the initiation of, material developments in or conclusion of litigation to enforce or defend any of the combined organization's intellectual property rights or defend against the intellectual property rights of others;
- announcements by the combined organization, commercial partners or competitors of new products or product enhancements, clinical progress or the lack thereof, significant contracts, commercial relationships or capital commitments;
- competition from existing technologies and products or new technologies and products that may emerge;
- the loss of key employees;
- changes in estimates or recommendations by securities analysts, if any, who cover the combined organization's common stock;

- general and industry-specific economic conditions that may affect the combined organization's research and development expenditures;
- the low trading volume and the high proportion of shares held by affiliates;
- changes in the structure of health care payment systems; and
- period-to-period fluctuations in the combined organization's financial results.

Moreover, the stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of individual companies. These broad market fluctuations may also adversely affect the trading price of the combined organization's common stock.

In the past, following periods of volatility in the market price of a company's securities, stockholders have often instituted class action securities litigation against those companies. Such litigation, if instituted, could result in substantial costs and diversion of management attention and resources, which could significantly harm the combined organization's profitability and reputation.

Anti-takeover provisions in the combined organization's charter documents and under Delaware law could make an acquisition of the combined organization more difficult and may prevent attempts by the combined organization stockholders to replace or remove the combined organization management.

Provisions in the combined organization's certificate of incorporation and bylaws may delay or prevent an acquisition or a change in management. These provisions include a prohibition on actions by written consent of the combined organization's stockholders and the ability of the board of directors to issue preferred stock without stockholder approval. In addition, because the combined organization will be incorporated in Delaware, it is governed by the provisions of Section 203 of the DGCL, which prohibits stockholders owning in excess of 15% of the outstanding combined organization voting stock from merging or combining with the combined organization. Although Organovo and Tarveda believe these provisions collectively will provide for an opportunity to receive higher bids by requiring potential acquirors to negotiate with the combined organization's board of directors, they would apply even if the offer may be considered beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by the combined organization's stockholders to replace or remove then current management by making it more difficult for stockholders to replace members of the board of directors, which is responsible for appointing the members of management.

Organovo and Tarveda do not anticipate that the combined organization will pay any cash dividends in the foreseeable future.

The current expectation is that the combined organization will retain its future earnings to fund the development and growth of the combined organization's business. As a result, capital appreciation, if any, of the common stock of the combined organization will be your sole source of gain, if any, for the foreseeable future. In addition, Tarveda's ability to pay dividends is limited by covenants in Tarveda's secured loan facility with Oxford. Following the Merger, the combined organization will be a holding company, and its ability to pay dividends will be dependent upon its subsidiaries' ability to make distributions, which may be restricted by covenants in such secured loan facility or any future contractual obligations.

Future sales of shares by existing stockholders could cause the combined organization stock price to decline.

If existing stockholders of Organovo and Tarveda sell, or indicate an intention to sell, substantial amounts of the combined organization's common stock in the public market after the post-Merger legal restrictions on resale discussed in this proxy statement/prospectus/information statement lapse, the trading price of the common stock of the combined organization could decline. Based on shares outstanding as of December 31, 2019 and shares expected to be issued upon completion of the Merger, the combined organization is expected to have outstanding

a total of approximately 562.4 million shares of common stock (without giving effect to the proposed Organovo Reverse Stock Split) immediately following the completion of the Merger. Approximately 140.4 million of such shares of common stock will be freely tradable, without restriction, in the public market. Approximately 422.0 million of such shares will be held by directors, executive officers of the combined organization and other affiliates that are subject to resale restrictions set forth in the Lock-Up Agreements (as defined herein). In addition, shares of common stock that are subject to outstanding options of Tarveda will become eligible for sale in the public market to the extent permitted by the provisions of various vesting agreements and Rules 144 and 701 under the Securities Act. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of the combined organization common stock could decline.

The ownership of the combined organization common stock will be initially highly concentrated, and may prevent you and other stockholders from influencing significant corporate decisions and may result in conflicts of interest that could cause the combined organization stock price to decline.

Executive officers, directors of the combined organization and their affiliates are expected to beneficially own or control approximately 74.3% of the outstanding shares of the combined organization common stock following the completion of the Merger (after giving effect to the exercise of all outstanding vested and unvested options and warrants). Accordingly, these executive officers, directors and their affiliates, acting as a group, will have substantial influence over the outcome of corporate actions requiring stockholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of the combined organization assets or any other significant corporate transactions. These stockholders may also delay or prevent a change of control of the combined organization, even if such a change of control would benefit the other stockholders of the combined organization. The significant concentration of stock ownership may adversely affect the trading price of the combined organization’s common stock due to investors’ perception that conflicts of interest may exist or arise.

FORWARD-LOOKING STATEMENTS

This proxy statement/prospectus/information statement and information incorporated by reference herein contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding future financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “anticipate,” “believe,” “continue,” “could,” “design,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially,” “predict,” “seek,” “should,” “will” or the negative of these terms or other similar expressions.

All statements other than statements of historical fact are statements that could be deemed forward-looking statements. For example, forward-looking statements include any statements of the plans, strategies and objectives of management for future operations, including the execution of integration and restructuring plans and the anticipated timing of filings; any statements concerning proposed new products, services or developments; any statements regarding future economic conditions or performance; statements of belief and any statement of assumptions underlying any of the foregoing. Forward looking statements may also include any statements of the plans, strategies and objectives of management with respect to the approval and consummation of the Merger, Organovo’s ability to solicit a sufficient number of proxies to approve the Merger and other matters related to the consummation of the Merger.

For a discussion of the factors that may cause Organovo, Tarveda or the combined organization’s actual results, performance or achievements to differ materially from any future results, performance or achievements expressed or implied in such forward-looking statements, or for a discussion of risk associated with the ability of Organovo and Tarveda to complete the Merger and the effect of the Merger on the business of Organovo, Tarveda and the combined organization, see the section titled “*Risk Factors*” in this proxy statement/prospectus/information statement.

These forward-looking statements include, but are not limited to, statements concerning the following:

- the expected benefits of and potential value created by the Merger for the stockholders of Organovo and Tarveda;
- likelihood of the satisfaction of certain conditions to the completion of the Merger and whether and when the Merger will be consummated;
- Organovo’s ability to control and correctly estimate its operating expenses and its expenses associated with the Merger;
- any statements of the plans, strategies and objectives of management for future operations, including the execution of integration plans and the anticipated timing of filings;
- any statements of plans to develop and commercialize additional products;
- any statements concerning the attraction and retention of highly qualified personnel;
- any statements concerning the ability to protect and enhance the combined organization’s products, product candidates and intellectual property;
- any statements regarding expectations concerning Tarveda’s relationships and actions with third parties; and
- future regulatory, judicial and legislative changes in Tarveda’s industry.

You should not rely upon forward-looking statements as predictions of future events. Neither Organovo nor Tarveda can assure you that the events and circumstances reflected in the forward-looking statements will be achieved or occur. Except as required by law, neither Organovo nor Tarveda undertakes any obligation to update publicly any forward-looking statements for any reason after the date of this prospectus or to conform these statements to actual results or to changes in expectations.

In addition, statements that "we believe" and similar statements reflect the beliefs and opinions on the relevant subject of Organovo, Tarveda or the combined organization, as applicable. These statements are based upon information available as of the date of this prospectus, and while Organovo, Tarveda or the combined organization, as applicable, believes such information forms a reasonable basis for such statements, such information may be limited or incomplete, and such statements should not be read to indicate that Organovo, Tarveda or the combined organization has conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

If any of these risks or uncertainties materializes or any of these assumptions proves incorrect, the results of Organovo, Tarveda or the combined organization could differ materially from the forward-looking statements. All forward-looking statements in this proxy statement/prospectus/information statement are current only as of the date on which the statements were made. Organovo and Tarveda do not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any statement is made or to reflect the occurrence of unanticipated events.

THE SPECIAL MEETING OF ORGANOVO STOCKHOLDERS

Date, Time and Place

The special meeting of Organovo stockholders will be held on March 26, 2020 at the offices of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, 3570 Carmel Mountain Road, Suite 200, San Diego, California 92130, commencing at 10:00 a.m. Pacific Time. Organovo is sending this proxy statement/prospectus/information statement to its stockholders in connection with the solicitation of proxies by the Organovo board of directors for use at the Organovo special meeting and any adjournments or postponements of the special meeting. This proxy statement/prospectus/information statement is first being furnished to stockholders of Organovo on or about February 26, 2020.

Purposes of the Organovo Special Meeting

1. To consider and vote upon a proposal to approve the issuance of shares of Organovo common stock in the Merger in accordance with the terms of the Merger Agreement, a copy of which is attached as *Annex A* to the accompanying proxy statement/prospectus/information statement.
2. To approve the amendment to the certificate of incorporation of Organovo to effect the Organovo Reverse Stock Split, in the form attached as *Annex D* to the accompanying proxy statement/prospectus/information statement.
3. To consider and vote upon a proposal to approve, on a non-binding advisory vote basis, compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger.
4. To consider and vote upon a proposal to approve the 2020 Plan, a copy of which is attached as *Annex E* to the accompanying proxy statement/prospectus/information statement.
5. To consider and vote upon an adjournment of the Organovo special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Organovo Proposal Nos. 1, 2, 3 and 4.
6. To transact such other business as may properly come before the Organovo special meeting or any adjournment or postponement thereof.

Recommendation of the Organovo Board of Directors

- The Organovo board of directors has determined and believes that the issuance of shares of Organovo common stock pursuant to the Merger is in the best interests of Organovo and its stockholders and has approved such items. The Organovo board of directors recommends that Organovo stockholders vote “FOR” Organovo Proposal No. 1 to approve the issuance of shares of Organovo common stock in the Merger in accordance with the terms of the Merger Agreement.
- The Organovo board of directors has determined and believes that it is advisable to, and in the best interests of, Organovo and its stockholders to approve the amendment to the certificate of incorporation of Organovo effecting the proposed Organovo Reverse Stock Split, as described in this proxy statement/prospectus/information statement. The Organovo board of directors recommends that Organovo stockholders vote “FOR” Organovo Proposal No. 2 to approve the amendment to the certificate of incorporation of Organovo effecting the proposed Organovo Reverse Stock Split, as described in this proxy statement/prospectus/information statement.
- The Organovo board of directors has determined and believes that the compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger is appropriate, and accordingly recommends that the Organovo stockholders vote “FOR” Organovo Proposal No. 3 to approve, on a non-binding advisory vote basis, such compensation.

- The Organovo board of directors has determined and believes that the adoption of the 2020 Plan is advisable to, and in the best interests of, Organovo and the Organovo stockholders. The Organovo board of directors recommends that Organovo stockholders vote "FOR" Organovo Proposal No. 4 to approve the adoption of the 2020 Plan.
- The Organovo board of directors has determined and believes that adjourning the Organovo special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Organovo Proposal Nos. 1, 2, 3 or 4 is advisable to, and in the best interests of, Organovo and its stockholders and has approved and adopted the proposal. The Organovo board of directors recommends that Organovo stockholders vote "FOR" Organovo Proposal No. 5 to adjourn the Organovo special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Organovo Proposal Nos. 1, 2, 3 and 4.

Record Date and Voting Power

Only holders of record of Organovo common stock at the close of business on the record date, February 14, 2020 are entitled to notice of, and to vote at, the Organovo special meeting. There were approximately 89 holders of record of Organovo common stock at the close of business on the record date. At the close of business on the record date, 130,497,563 shares of Organovo common stock were issued and outstanding. Each share of Organovo common stock entitles the holder thereof to one vote on each matter submitted for stockholder approval at the Organovo special meeting. See the section titled "*Principal Stockholders of Organovo*" in this proxy statement/prospectus/information statement for information regarding persons known to the management of Organovo to be the beneficial owners of more than 5% of the outstanding shares of Organovo common stock.

Voting and Revocation of Proxies

The proxy accompanying this proxy statement/prospectus/information statement is solicited on behalf of the Organovo board of directors for use at the Organovo special meeting.

If you are a stockholder of record of Organovo as of the record date referred to above, you may vote in person at the Organovo special meeting or vote by proxy using the enclosed proxy card. Whether or not you plan to attend the Organovo special meeting, Organovo urges you to vote by proxy to ensure your vote is counted. You may still attend the Organovo special meeting and vote in person if you have already voted by proxy. As a stockholder of record:

- *to vote in person*, come to the Organovo special meeting and Organovo will give you a ballot when you arrive.
- *to vote using the proxy card*, simply mark, sign and date your proxy card and return it promptly in the postage-paid envelope provided. If you return your signed proxy card to Organovo before the Organovo special meeting, Organovo will vote your shares as you direct.
- *to vote on the Internet*, go to the website on the proxy card or voting instruction form to complete an electronic proxy card. You will be asked to provide the company number and control number from the enclosed proxy card. Your vote must be received by 11:59 PM Eastern Time on March 25, 2020 to be counted.
- *to vote by telephone*, call the phone number provided on your proxy card. You will be asked to provide the company number and control number from the enclosed proxy card. Your vote must be received by 11:59 PM Eastern Time on March 25, 2020 to be counted.

If your Organovo shares are held by your broker as your nominee, that is, in "street name," the enclosed voting instruction card is sent by the institution that holds your shares. Please follow the instructions included on that proxy card regarding how to instruct your broker to vote your Organovo shares. If you do not give

instructions to your broker, your broker can vote your Organovo shares with respect to "discretionary" items but not with respect to "non-discretionary" items. Discretionary items are proposals considered routine under the rules of the New York Stock Exchange on which your broker may vote shares held in "street name" in the absence of your voting instructions. On non-discretionary items for which you do not give your broker instructions, the Organovo shares will be treated as broker non-votes. Organovo Proposal Nos. 2 and 5 are discretionary matters and Organovo Proposal Nos. 1, 3 and 4 are non-discretionary matters. As a result, banks, brokers and other nominees will have discretion to vote on Organovo Proposal Nos. 2 and 5, but will not have discretion to vote on Organovo Proposal Nos. 1, 3 and 4.

Broker non-votes will not be considered as votes cast by the holders of Organovo common stock present in person or represented by proxy at the Organovo special meeting, and will therefore not have any effect with respect to Proposal Nos. 1, 3 or 4.

All properly executed proxies that are not revoked will be voted at the Organovo special meeting and at any adjournments or postponements of the Organovo special meeting in accordance with the instructions contained in the proxy. If a holder of Organovo common stock executes and returns a proxy and does not specify otherwise, the shares represented by that proxy will be voted "FOR" Organovo Proposal No. 1 to approve the issuance of shares of Organovo common stock in the Merger in accordance with the terms of the Merger Agreement; "FOR" Organovo Proposal No. 2 to approve the amendment to the certificate of incorporation of Organovo effecting the proposed Organovo Reverse Stock Split described in this proxy statement/prospectus/information statement; "FOR" Organovo Proposal No. 3 to approve, on a non-binding advisory vote basis, compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger; "FOR" Organovo Proposal No. 4 to approve the adoption of the 2020 Plan; and "FOR" Organovo Proposal No. 5 to adjourn the Organovo special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Organovo Proposal Nos. 1, 2, 3 or 4 in accordance with the recommendation of the Organovo board of directors.

Organovo stockholders of record, other than those Organovo stockholders who have executed support agreements, may change their vote at any time before their proxy is voted at the Organovo special meeting in one of three ways. First, a stockholder of record of Organovo can send a written notice to the Secretary of Organovo stating that the stockholder would like to revoke its proxy. Second, a stockholder of record of Organovo can submit new proxy instructions either on a new proxy card or via the Internet. Third, a stockholder of record of Organovo can attend the Organovo special meeting and vote in person. Attendance alone will not revoke a proxy. If an Organovo stockholder of record or a stockholder who owns Organovo shares in "street name" has instructed a broker to vote its shares of Organovo common stock, the stockholder must follow directions received from its broker to change those instructions.

Vote Required

The presence, in person or represented by proxy, at the Organovo special meeting of the holders of a majority of the shares of Organovo common stock outstanding and entitled to vote at the Organovo special meeting is necessary to constitute a quorum at the meeting. Abstentions and broker non-votes will be counted towards a quorum. Approval of Organovo Proposal Nos. 1, 3, 4 and 5 requires the affirmative vote of a majority of the voting power of the votes cast at the Organovo special meeting, whether present in person or represented by proxy at the Organovo special meeting. Approval of Organovo Proposal No. 2 requires the affirmative vote of holders of a majority of the outstanding Organovo common stock having voting power on the record date for the Organovo special meeting.

Votes will be counted by the inspector of election appointed for the meeting, who will separately count "FOR" and "AGAINST" votes, abstentions and broker non-votes. Abstentions will be counted towards the vote total and will have the same effect as "AGAINST" votes with respect to Organovo Proposal No. 2 and will have no effect and will not be counted towards the vote total with respect to Organovo Proposal Nos. 1, 3, 4 and 5.

Broker non-votes will not be considered as votes cast by the holders of Organovo common stock present in person or represented by proxy at the Organovo special meeting, and will therefore not have any effect with respect to Proposal Nos. 1, 3 or 4.

As of December 31, 2019, the directors and executive officers of Organovo owned less than 1% of the outstanding voting shares of Organovo common stock entitled to vote at the Organovo special meeting. The directors and executive officers of Organovo are subject to support agreements. Each stockholder that entered into a support agreement has agreed to vote all shares of Organovo common stock owned by the stockholder as of the record date (a) in favor of the Organovo Stockholder Proposals and any other matter necessary to consummate the transactions contemplated by the Merger Agreement, and (b) to vote against any "acquisition proposal," as defined in the Merger Agreement. As of December 31, 2019, Organovo is not aware of any affiliate of Tarveda owning any shares of Organovo common stock entitled to vote at the Organovo special meeting.

Solicitation of Proxies

In addition to solicitation by mail, the directors, officers, employees and agents of Organovo may solicit proxies from Organovo stockholders by personal interview, telephone, telegram or otherwise. Organovo and Tarveda will share equally the costs of printing and filing this proxy statement/prospectus/information statement and proxy card. Arrangements will also be made with brokerage firms and other custodians, nominees and fiduciaries who are record holders of Organovo common stock for the forwarding of solicitation materials to the beneficial owners of Organovo common stock. Organovo will reimburse these brokers, custodians, nominees and fiduciaries for the reasonable out-of-pocket expenses they incur in connection with the forwarding of solicitation materials. Organovo has engaged D.F. King & Co., Inc. to assist in the solicitation of proxies and provide related advice and informational support, for a services fee and the reimbursement of customary disbursements, which are not expected to exceed $0.2 million in total.

Other Matters

As of the date of this proxy statement/prospectus/information statement, the Organovo board of directors does not know of any business to be presented at the Organovo special meeting other than as set forth in the notice accompanying this proxy statement/prospectus/information statement. If any other matters should properly come before the Organovo special meeting, it is intended that the shares represented by proxies will be voted with respect to such matters in accordance with the judgment of the persons voting the proxies.

THE MERGER

This section and the section titled "The Merger Agreement" in this proxy statement/prospectus/information statement describe the material aspects of the Merger, including the Merger Agreement. While Organovo and Tarveda believe that this description covers the material terms of the Merger and the Merger Agreement, it may not contain all of the information that is important to you. You should read carefully this entire proxy statement/prospectus/information statement for a more complete understanding of the Merger and the Merger Agreement, including the Merger Agreement attached to this proxy statement/prospectus/information statement as Annex A, the opinion of Roth attached as Annex B, and the other documents to which you are referred herein. See the section titled "Where You Can Find More Information" in this proxy statement/prospectus/information statement.

Background of the Merger

Historical Background for Organovo

Organovo is a biotechnology company that has focused on pioneering the development of three dimensional ("3D") bioprinted human tissues that emulate human biology and disease. Organovo had been developing its *in* vivo liver tissues to treat end-stage liver disease and a select group of life-threatening, orphan diseases, for which there are limited treatment options other than organ transplantation.

During the first quarter of calendar 2019, Organovo had retained Roth Capital Partners ("Roth") to raise capital for Organovo through the issuance of its common stock. Roth is an advisory firm that focuses on mergers and acquisitions, corporate finance, licensing and asset sale transactions for life sciences companies. Despite its efforts, Organovo was unable to complete the fundraising on acceptable terms or in a sufficient amount to support its development and business objectives. Organovo's management team also received feedback during the fundraising process from financial institutions and investment funds suggesting that obtaining financing for Organovo's development programs would be extremely challenging, highly dilutive to its existing stockholders and likely in small increments that would not be sufficient to support Organovo's long-term business plans, until such time as Organovo had successfully completed its first IND submission. Following this unsuccessful financing effort, the Organovo board of directors requested Organovo's management team to contact customers, collaborators and distributors, and pharmaceutical, 3D bioprinting and regenerative medicine companies to explore potential collaborations, licensing and other commercial arrangements that could enable Organovo to secure the funding necessary to continue the development of its liver tissue, continue the development of one or more of its pipeline tissue candidates or otherwise utilize its technology platform and capabilities. Organovo's management team contacted these various parties starting in April 2019, and held discussions regarding potential collaborations, licensing and other commercial arrangements. These discussions continued through June and July of 2019, and conversations with some of these parties evolved into conversations regarding potential strategic transactions as discussed below.

In May 2019, in light of the variability in data from recent preclinical studies involving tissues implanted in over 500 test animals compared to the data from its prior pilot studies, Organovo announced plans to conduct additional preclinical studies necessary to optimize its manufacturing processes. In particular, Organovo sought to conduct a range of optimization studies to identify potential issues causing the reduced functionality and durability of its *in vivo* liver tissue patches, improve the viability and durability of the tissues, and generate consistent scientific data regarding their prolonged functionality and therapeutic benefits.

In August 2019, after a rigorous assessment of Organovo's *in vivo* liver tissue program following completion of various preclinical studies, Organovo's board of directors concluded that the variability of biological performance and related duration of potential benefits presented significant development challenges and lengthy redevelopment timelines that no longer supported an attractive opportunity for Organovo and its stockholders given Organovo's available resources and its expected challenges to raise the significant additional

funds that would be required on terms favorable to its existing stockholders, or at all. The Organovo board of directors also deemed the stage of development of Organovo's other therapeutic pipeline assets, including stem cell based tissue programs, to be too premature to potentially reach an Investigational New Drug ("IND") filing within an acceptable investment horizon and with Organovo's available resources. Further, Organovo's efforts since April 2019 to explore potential collaborations, licensing agreements or other commercial arrangements with existing customers, collaborators and distributors and other parties in 3D bioprinting, cell therapy and regenerative medicine had not resulted in a term sheet or any significant discussions regarding a potential transaction that would enable Organovo to continue to support its development activities and business plans. As a result, as previously announced in August 2019, the Organovo board of directors approved the suspension of the development of Organovo's lead program and other related in-house pipeline development activities and significantly reduced its workforce. Organovo retained certain key management, employees and consultants, its core intellectual property, its licenses and collaborations with research institutions and universities, and its proprietary equipment, and has continued its operations.

Organovo Strategic Alternatives Process

Following the August 2019 announcement, the Organovo board of directors commenced a process of evaluating Organovo's strategic alternatives to maximize stockholder value, including evaluating a range of ways to generate value from its therapeutic tissue candidates, its technology platform and intellectual property, its commercial and development capabilities, its listing on The Nasdaq Stock Market, and its remaining financial assets.

A special committee of the Organovo board of directors, which is comprised entirely of independent, non-employee directors, was assigned responsibility for evaluating Organovo's strategic alternatives to maximize stockholder value. The members of the Organovo special committee are Mark Kessel (Chair), Rick Maroun, and Kirk Malloy. The strategic alternatives evaluated by the Organovo special committee (and the Organovo board of directors) included:

- strategic transactions, including possible mergers and business combinations and sales of part or all of Organovo's assets;
- collaboration, partnering and/or licensing transactions with respect to Organovo's tissue candidates and models, its platform technology and intellectual property; and
- winding down Organovo's operations and distributing any remaining cash to its stockholders.

The Organovo special committee and the Organovo board of directors also considered raising funds in private and/or public financings to support Organovo's future operations and development efforts, but after careful consideration deemed the stage of development of Organovo's, and its collaborators', therapeutic pipeline assets to be too premature to potentially reach IND filing status within an acceptable investment horizon and with Organovo's available resources. They also determined that attempting to raise the significant additional funds that would be required to support the redevelopment of Organovo's lead therapeutic liver tissue or the development of Organovo's, and its collaborators', early stage therapeutic pipeline assets either would not be successful or would not be completed on terms that would be favorable to Organovo's existing stockholders. These conclusions were based on Organovo's unsuccessful attempts to raise capital in the first quarter of 2019.

To assist Organovo and its management team in identifying and evaluating Organovo's strategic alternatives, the Organovo special committee determined that it would be in the best interests of Organovo and its stockholders to retain a financial advisor. Following a search process, the Organovo special committee received bids from two potential financial advisors. After holding meetings with each potential financial advisor and reviewing their respective proposals, experience and qualifications, the Organovo special committee elected to retain Roth to serve as its exclusive financial advisor in connection with the strategic alternatives process. Following approval by the Organovo special committee, Organovo executed an engagement letter with Roth on August 6, 2019.

The Organovo special committee provided oversight and guidance to Organovo's management team during the strategic alternatives process, reviewed and evaluated the recommendations of Organovo's management team and held in-person meetings and participated in the negotiation process with potential strategic transaction partners. From August 6, 2019 through December 12, 2019, the Organovo special committee held five formal meetings. In addition to the formal meetings, Organovo's executive management team updated the Organovo special committee regarding the status of the strategic alternatives process through weekly conference calls and other communications. Based on instructions from the Organovo special committee, Organovo's management team did not discuss any employment terms for the existing officers or employees of Organovo with any potential strategic partner.

Potential Strategic Alternatives

From August 6, 2019 through December 12, 2019, the Organovo board of directors and the Organovo special committee evaluated potential strategic transactions as a means of maximizing value for Organovo's existing stockholders. In identifying potential strategic transaction partners, the Organovo special committee assessed life science companies based on the following factors:

- the economic terms offered by the target company, including the ownership percentage Organovo's existing stockholders would have in the combined organization, the valuation assigned to Organovo, the amount of capital the target company anticipated having at closing to support the future operations of the combined organization and the impact of any concurrent financing on the final ownership percentages of the combined organization;
- the target company's stage of development, with an emphasis on clinical or commercial stage assets;
- the target company's product portfolio and pipeline, with an emphasis on multiple products, multiple therapeutic indications across multiple clinical trials, and platforms capable of generating follow-on products for the clinic in the near-term;
- whether the target company possessed any validating collaborations, peer reviewed publications, distinctions or data, and/or investments by respected venture capital funds or strategic investors;
- the experience and strength of the management team of the target company, with an emphasis on successful entrepreneurs, public company experience, depth of management team, including a full-time chief executive officer, a full-time chief financial officer and heads of clinical development, regulatory and other critical departments;
- potential valuation inflection points with respect to the target company based on its technology and regulatory milestones achievable with the financial resources of the combined organization, with emphasis on transition to later stage clinical phases such as Phase 2 or 3 and/or commercialization;
- whether the target company was ready for a public company listing and that the combined organization could satisfy the continued listing requirements of The Nasdaq Stock Market;
- other valuation considerations, including current and future financing needs and plans, short-term business risks (e.g., contingent financings and funding risks, required licensing agreements, imminent FDA submissions, imminent data readouts); and
- whether the target company could meet its closing requirements, including target company stockholder approvals.

After its engagement, Roth screened more than 261 life science companies to identify potential strategic transaction partners who might have an interest in completing a strategic transaction with Organovo and could maximize value to Organovo's stockholders. These companies consisted of private companies in the life sciences sector who had completed a late stage financing round or were considering an initial public offering ("IPO") and publicly-traded companies in the life sciences sector traded on the over-the-counter bulletin board or on

exchanges outside the U.S. seeking a listing on The Nasdaq Stock Market, and companies that were believed to have a strategic fit with Organovo or were seeking a business combination transaction as a de facto financing event. Furthermore, there was interest from companies known to Organovo's management and the Organovo board of directors and unsolicited inquiries. Of these companies, 81 companies expressed an interest in Organovo and were provided non-confidential information about Organovo. Organovo's management team negotiated confidentiality and standstill agreements and commenced the due diligence process with 51 of these companies. Of these companies, 49 were sent bid process instructions and 27 companies submitted non-binding indications of interest. Eight of these companies were invited to present to the Organovo special committee. These activities resulted in Organovo discussing and negotiating term sheets for a potential strategic transaction with four life science companies, with the Organovo special committee and the Organovo board of directors concluding that it would be in the best interests of Organovo and its stockholders to complete the proposed Merger with Tarveda.

History of Strategic Alternatives Discussions and Significant Corporate Events

On June 24, 2019, Organovo's Chief Executive Officer and the chief executive officer of a privately held biotechnology company, Company A, held a call to continue the discussions the parties had been having over the past several months regarding potential collaboration and/or licensing transactions related to their complimentary lead therapeutic liver programs. During this call, Company A discussed its long-terms plans of pursuing a public offering, or otherwise accessing the public market, in order to access funds to support its continued development efforts. This led to a discussion of a possible strategic combination of the two companies. At the end of the call, the chief executive officer of Company A stated that he planned to have a discussion with his board of directors regarding Organovo, and that he would get back to Organovo following this discussion.

On July 8, 2019, Organovo's Chief Executive Officer and the chief executive officer of Company B, a privately held biotechnology company, held a call to continue the discussions the parties had been having over the past several months regarding potential collaboration and/or licensing transactions. Company B discussed its financing plans on this call, which included a potential public offering, or otherwise accessing the public market. This led to a discussion of a possible strategic combination of the two companies, in addition to a potential collaboration and/or licensing transaction. The chief executive officer of Company B stated that he planned to have a discussion with his board of directors regarding Organovo, and that he would get back to Organovo following this discussion.

On July 9, 2019, executives of Organovo conducted a telephone conference with executives of Company C, a publicly held biotechnology company. Organovo and Company C had been in ongoing discussions since October 2018 regarding a potential collaboration and/or joint development agreement. During the call, the parties discussed a potential collaboration that would combine elements of each company's technology to create a next generation therapeutic liver tissue product. During the call, representatives of Company C indicated that they may be interested in a strategic acquisition of Organovo, and requested a confidentiality agreement to facilitate an exchange of scientific information.

On July 11, 2019, Organovo's Chief Executive Officer followed up with the chief executive officer of Company A to determine if he had received any direction from his board of directors regarding their earlier discussion of a potential business combination or other collaboration with Organovo. Organovo's Chief Executive Officer then sent Organovo's current non-confidential investor relations slide deck to the chief executive officer of Company A.

On July 14, 2019, the chief executive officer of Company A informed Organovo's Chief Executive Officer that Company A was not interested in pursuing a business combination or other collaboration with Organovo.

On July 14, 2019, the chief executive officer of Company C sent Organovo's Chief Executive Officer a list of diligence questions.

On July 22, 2019, Company C executed a confidentiality agreement with Organovo, which contained customary standstill provisions.

On July 25, 2019, the Organovo board of directors held a duly called meeting. Organovo's management team reviewed Organovo's efforts since the May 2019 board meeting to improve the functionality of Organovo's lead therapeutic liver tissue program. The Organovo board of directors discussed its assessment that it would be necessary to redesign the liver tissue (likely incorporating stem cells) in order to proceed to an IND, which could take several years, and would require significant additional investment and involve significant development risks. The Organovo board members concurred with the conclusions of the Organovo management team.

Organovo's Chief Executive Officer then reviewed Organovo's management team's assessment of the strategic options available to Organovo. He confirmed that none of Organovo's discussion with customers, collaborators and distributors and pharmaceutical, 3D bioprinting, and regenerative medicine companies had resulted in a term sheet or any significant interest regarding a potential transaction that would enable Organovo to continue to support its development activities and business plans. The Organovo management team then discussed Organovo's other pipeline therapeutic tissues, each of which were in the early stages of development and would require significant additional time and resources before Organovo could potentially submit an IND for one of these therapeutic tissues.

The Organovo board of directors then discussed Organovo's potential alternatives, including the associated headcount, timelines, and financial impact of each alternative. The Organovo board of directors then received presentations from two investment banks, including Roth, regarding their qualifications and experience in assisting companies similarly situated to Organovo in evaluating their strategic alternatives.

On July 26, 2019, Organovo sent Company C a set of confidential briefing documents.

On July 29, 2019, Organovo's Chief Executive Officer and the chief executive officer of a privately held 3D printing company with a large medical device program, Company D, held an introductory call regarding a potential collaboration and/or licensing transaction between the parties. The range of transactions discussed by the parties also included a potential business combination. Following the call, Organovo's Chief Executive Officer sent the chief executive officer of Company D a non-confidential slide deck to provide further information about Organovo's business and technology.

On August 6, 2019, the Organovo board of directors held a meeting to discuss Organovo's strategic direction. The Organovo board of directors concluded that Organovo had not generated sufficient scientific data supporting the prolonged functionality and therapeutic benefit of its lead therapeutic liver tissue program to pursue further clinical development. The Organovo board of directors also concluded that redevelopment of the tissue would require significant time, involve substantial risks and require significant additional investment which Organovo would not likely be successful in raising and, even if Organovo could raise the funds, would likely not provide sufficient return on investment for Organovo's stockholders to warrant the dilution and risks of pursuing such additional investment. The Organovo board of directors also concluded that Organovo's other therapeutic pipeline assets, including stem cell based tissue programs, were too premature to potentially reach IND filing status within an acceptable investment horizon and with Organovo's available resources. Organovo's Chief Executive Officer also confirmed that Organovo's outreach to its existing customers and potential collaboration and licensing partners had not resulted in a term sheet or any serious discussions regarding a potential transaction that would enable Organovo to continue to support its development activities and business plans. As a result, the Organovo board of directors approved the suspension of all development of Organovo's lead liver tissue program and other related pipeline development activities. The Organovo board of directors also approved a restructuring plan to significantly reduce expenses in order to preserve Organovo's cash resources.

In addition, at the meeting on August 6, 2019, the Organovo board of directors appointed a special committee to run a process of evaluating Organovo's strategic alternatives to maximize stockholder value,

including evaluating a range of ways to generate value from its technology platform and intellectual property, its commercial and development capabilities, its listing on The Nasdaq Stock Market, and its remaining financial assets. The Organovo board of directors also empowered and requested the Organovo special committee to evaluate potential strategic transactions, negotiate the terms thereof, and make recommendations to the Organovo board of directors in regard to such potential strategic transactions. The Organovo special committee engaged Roth as the Organovo board of director's financial advisor with respect to identifying and evaluating potential strategic alternatives.

During the summer of 2019, Organovo had been in separate discussions with Company E and Company F about a potential collaboration and licensing agreement relating to a pipeline program. On August 9, 2019, Organovo's Chief Executive Officer independently informed executives of Company E and Company F of the suspension of Organovo's lead program and the initiation of a strategic alternatives process, and proposing to each of them a telephone conference to discuss their interest in participating in Organovo's strategic alternatives process.

On August 11, 2019, the chief executive officer of Company C informed Organovo's Chief Executive Officer that Company C would consider entering Organovo's strategic alternatives process. Organovo's Chief Executive Officer then sent Company C's chief executive officer an updated briefing document.

On August 12, 2019, a representative of Company F communicated with Organovo indicating that the company was not interested in participating in Organovo's strategic alternatives process. Company F did indicate that it might be interested in licensing or acquiring patents related to one of Organovo's pipeline tissue programs. Company F ultimately decided against pursuing a licensing or patent acquisition transaction.

Beginning on August 13, 2019 and continuing through September 27, 2019, representatives of Roth sent non-confidential information regarding Organovo's strategic alternatives process to 81 companies. From August 13, 2019 to September 27, 2019, a total of 51 companies executed confidentiality and standstill agreements with Organovo and 49 companies received confidential briefing materials and bid instructions.

On August 14, 2019, Organovo entered into a confidentiality and standstill agreement with Company G.

On August 15, 2019, executives of Organovo and executives of Company E conducted a telephone conference to discuss Company E's interest in participating in Organovo's strategic alternatives process, or in the alternative, licensing and/or acquiring patents relating to the pipeline program that Organovo and Company E had previously discussed regarding a potential collaboration.

On August 15, 2019, Organovo entered into a confidentiality and standstill agreement with Tarveda.

On August 22, 2019, the chief executive officer of Company B communicated with Organovo's Chief Executive Officer indicating that it would be interested in becoming part of the strategic alternatives process. Organovo's Chief Executive Officer referred Company B to representatives of Roth.

On August 22, 2019, the chief executive officer of Company C communicated with Organovo's Chief Executive Officer indicating that Company C would not pursue an acquisition of Organovo, but might be interested in acquiring certain of Organovo's patents.

On August 22, 2019, a representative of Company F communicated with Organovo indicating that Company F would be interested in continuing discussions about a strategic acquisition of Organovo, with the goal of pursuing development of one or more of Organovo's pipeline programs, including the program that Organovo and Company F had previously discussed regarding a potential collaboration. Organovo then sent Company F a confidentiality and standstill agreement.

On August 22, 2019, Organovo entered into a confidentiality and standstill agreement with Company H.

On August 26, 2019, Organovo entered into a confidentiality and standstill agreement with Company I.

On August 27, 2019, the Organovo board of directors convened a meeting during which Organovo's management team and representatives of Roth provided updates regarding the outreach to potential strategic acquirers of Organovo and the likely timelines for next steps in the process.

On August 29, 2019, Organovo entered into a confidentiality and standstill agreement with Company I.

On September 2, 2019, Company E delivered an executed confidentiality and standstill agreement. Organovo then sent representatives of Company E a set of confidential briefing materials. Executives of Organovo and Company E then conducted a telephone conference in which Organovo presented its technology platform, pipeline programs, intellectual property portfolio, and strategic alternatives options.

On September 5, 2019, an executive of Company E communicated with Organovo's Chief Executive Officer indicating that Company E had completed its review and concluded the Organovo's pipeline tissue programs were too early in the development stage to justify an acquisition of the entire company, or even an asset acquisition to enable Company E to pursue development of one or more of Organovo's pipeline tissue programs. Company E indicated that given the early stage of Organovo's pipeline tissue programs, it would only consider a limited collaboration or fee-for-service project. Company E indicated that it might be interested in acquiring certain patents relevant to a pipeline tissue program.

From September 5, 2019 to September 17, 2019, representatives of Roth sent bid instruction letters to 48 parties, representing all parties who had executed a confidentiality and standstill agreement with Organovo by that time. The bid instruction letters, as reviewed and approved by the Organovo special committee, detailed that interested parties should provide background information regarding their company, including the company's business, products, development timelines, key employees, stockholders, projected financing needs, and key inflection points. The letters further requested information regarding the proposed transaction structure, the proposed valuation of each company and proposed ownership of the combined organization, the proposed capital structure, anticipated cash at closing, plan for Organovo's products and employees, due diligence requirements, and closing conditions, and that responses were due by September 23, 2019.

On September 10, 2019, Organovo entered into a confidentiality and standstill agreement with Company K.

On September 10, 2019, Company L submitted an unsolicited, non-binding indication of interest to Organovo's executives to acquire Organovo. Organovo's executives sent Company L's submission to Roth for processing within the defined strategic alternatives process.

On September 11, 2019, representatives of Roth communicated with the chief executive officer of Company L indicating that while the Organovo special committee would consider Company L's proposal, Company L would not be able to participate in the formal strategic alternatives process without executing a confidentiality and standstill agreement in the form generally provided to other parties.

On September 12, 2019, representatives of Company L sent representatives of Roth a proposed revised version of the confidentiality and standstill agreement, with all the standstill provisions deleted.

On September 13, 2019, representatives of Organovo sent representatives of Company L a proposed revised version of the confidentiality and standstill agreement to add back and clarify certain standstill terms.

On September 16, 2019, the Chief Executive Officer of Tarveda had a telephone conversation with a representative from Roth to discuss Tarveda's general standing in the bid process and to request an extension to the due date for the bid letter so that Tarveda's management team would have an opportunity to discuss the transaction proposal with the Tarveda board of directors. The representative from Roth provided an extension of the deadline for the bid proposal to September 24, 2019.

On September 16, 2019, Organovo executed a confidentiality and standstill agreement with Company M.

On September 17, 2019, Company F executed a confidentiality and standstill agreement with Organovo.

On September 19, 2019, Organovo received non-binding letters of interest from Companies J, I, and K pursuant to the bid-process letter that Roth had provided to various parties on September 5, 2019.

On September 20, 2019, Organovo received a non-binding letter of interest from Company M, pursuant to the bid-process letter that Roth had provided to various parties on September 5, 2019.

On September 23, 2019, Organovo received a non-binding letter of interest from Company H, pursuant to the bid-process letter that Roth had provided to various parties on September 5, 2019.

On September 24, 2019, Organovo received a non-binding letter of interest from Tarveda, pursuant to the bid-process letter that Roth had provided to various parties on September 5, 2019.

On September 25, 2019, Organovo's management team sent information to the Organovo special committee, in advance of the Organovo special committee meeting scheduled for September 27, 2019, which included an explanation of the process Organovo's management team utilized to assess, evaluate and rank the companies who had submitted non-binding letters of interests. Based on this process, Organovo's management team ranked the top seven companies, which included: Tarveda, and Companies G, H, I, J, K and M. To assist with scheduling, Organovo's Chief Executive Officer requested, and received permission from the Organovo special committee, to begin inviting the top seven companies to in-person meetings to be held with the Organovo special committee on October 3 and 4, 2019.

On September 25, 2019, a representative from Roth communicated with executive officers of Tarveda, inviting them to present to the Organovo special committee in-person at a meeting scheduled for October 3, 2019. The Roth representative indicated that the presentation should elaborate on the bid process submission, including detailed overview of Tarveda and its programs, investment merits, management's experience and track record, historical and forward looking financial information, rationale for the proposed ownership split, readiness to be a public company and other general questions and comments.

On September 26, 2019, a representative from Roth invited representatives from Company G, Company H, Company J and Company K to participate in the in-person meetings with the Organovo special committee scheduled for October 3 or 4, 2019.

On September 26, 2019, Company L submitted a revised non-confidential proposal to the Organovo special committee. Company L's proposal cited its "strong interest in the in vitro uses of Organovo's 3D bioprinting technology to further [Company L's] work in NASH, as well as for expansion of [its] efforts into tissues beyond the liver and including the tissue areas in which Organovo has intellectual property and early bioprinted model success: kidney, intestine, and others." Company L further stated that as an alternative to acquiring all of Organovo and its assets, Company L is "open to an acquisition of solely the Organovo assets that [it] need[s] to pursue [its] in vitro tissues research. If Organovo believes such an arrangement could maximize Organovo's stockholder value by separately selling other core assets and maintaining Organovo's ability to still pursue a reverse merger for the remaining public shell, [Company L] will work to support such a transaction."

On September 26, 2019, Organovo received data room access to the data rooms of Companies G, M, and Tarveda. Organovo provided access to its data room to Tarveda and to Companies G, J, and M.

On September 27, 2019, Organovo granted data room access to H and I. On this same day, Roth also sent bid process instructions to another company that executed a confidentiality and standstill agreement bringing the total to 49.

On September 27, 2019, the Organovo special committee convened a meeting and received updates from Organovo's management team and Roth regarding the strategic alternatives process, in which more than 50 companies entered into confidentiality and standstill agreements with Organovo. The Organovo special committee discussed that 49 of these companies were provided with background information on Organovo and invited to submit letters of interest. Non-binding letters of interest were received from 27 companies addressing critical points to be evaluated as well as supportive materials such as corporate presentations, valuation charts, and additional scientific data.

The submissions were assessed by Organovo's management team and ranked based on several selection criteria, including:

- the economic terms offered by the target company, including the ownership percentage Organovo's existing stockholders would have in the combined organization, the valuation assigned to Organovo, the amount of capital the target company anticipated having at closing to support the future operations of the combined organization and the impact of any concurrent financing on the final ownership percentages of the combined organization;
- the target company's stage of development, with an emphasis on clinical or commercial stage assets;
- the target company's product portfolio and pipeline, with an emphasis on multiple products, multiple therapeutic indications across multiple clinical trials, and platforms capable of generating follow-on products for the clinic in the near-term;
- whether the target company possessed any validating collaborations, peer reviewed publications, distinctions or data, and/or investment by respected venture capital funds or strategic investors;
- the experience and strength of the management team of the target company, with an emphasis on successful entrepreneurs, public company experience, depth of management team, including a fulltime chief executive officer, a fulltime chief financial officer and heads of clinical development, regulatory and other critical departments;
- potential valuation inflection points with respect to the target company based on its technology and regulatory milestones achievable with the financial resources of the combined organization, with emphasis on transition to later stage clinical phases such as Phase 2 or 3 and/or commercialization;
- whether the target company was ready for a public company listing and that the company together with Organovo could satisfy the continued listing requirements of The Nasdaq Stock Market;
- other valuation considerations, including current and future financing needs and plans, short term business risks (e.g., contingent financings and funding risks, required licensing agreements, imminent FDA submissions, imminent data readouts); and
- whether the target company could meet its closing requirements, including target company stockholder approvals.

The Organovo special committee reviewed management's assessments and recommendations regarding the proposed ranking of each of the companies that submitted a letter of interest based on the above criteria.

Organovo's management team and the Organovo special committee then discussed in detail the material terms proposed by the seven companies Organovo's management team had ranked highest, including:

- Tarveda proposed an ownership split of 17.5%:82.5% for Organovo and Tarveda, respectively. With a combined organization valuation of $200 million, Tarveda's proposal valued Organovo at $35 million (based on Organovo having at least $18.5 million in cash at closing) and Tarveda at $165 million. Tarveda's proposal did not include a concurrent financing contingency.
- Company G proposed an ownership split of 9%:91% for Organovo and Company G, respectively, taking into account a concurrent financing contingency of between $30 to $60 million. Company G's

proposal attributed a total value of $25 million to Organovo (based on Organovo having at least $18.5 million in cash at closing), and a value of $253 million to Company G, assuming a concurrent financing of $45 million.

- Company H proposed an ownership split of 25%:75% for Organovo and Company H, respectively, not taking into account a concurrent contingent financing of $35 million. Company H's proposal attributed a total value of $25 million to Organovo (based on Organovo having at least $18.5 million in cash at closing), and Company H would be valued at $75 million.
- Company I proposed an ownership split of 18.2%:81.8% for Organovo and Company I, respectively. Company I's proposal attributed a total value of $30 million to Organovo (based on Organovo having at least $18.5 million in cash at closing), and Company I would be valued at $132 million. Company I's proposal did not include a concurrent financing contingency.
- Company J proposed an ownership split of 25%:75% for Organovo and Company J, respectively (based on Organovo having $20 to $23 million in cash at closing). Company J's proposal did not include a concurrent financing contingency. Company J's proposal also didn't attribute a valuation to Organovo, Company J or the combined organization.
- Company K proposed an ownership split of 21.5%:78.5% for Organovo and Company K, respectively, not taking into account a proposed $30 million concurrent financing contingency. Under Company K's proposal, Organovo would be valued at $26 million (based on Organovo having at least $18.5 million in cash at closing), and Company K would be valued at $95 million.
- Company M had proposed an ownership split of 17.4%:82.6% for Organovo and Company M, respectively. Under Company M's proposal, Organovo would be valued at $25.3 million (based on Organovo having at least $20 million in cash at closing), and Company M would be valued at $120 million. Company M's proposal did not include a concurrent financing contingency.

The Organovo special committee asked Organovo's management team questions regarding a number of the companies who were ranked below the top seven companies, including whether any of these companies should be invited to the in-person meetings. Based on this discussion, the Organovo special committee determined to invite Company N to participate in the in-person meetings. The Organovo special committee also discussed Company N's proposal:

- Company N proposed an ownership split of 20%:80% for Organovo and Company N, respectively, including a concurrent contingent financing of $15 million. Under Company N's proposal, Organovo would be valued at $25 million (based on Organovo having at least $18.5 million in cash at closing), and Company N would be valued at $100 million.

During the meeting and following a thorough review and extensive discussion, the Organovo special committee evaluated the ranking of all 27 companies based on the criteria discussed above. Based on this evaluation, the recommendations of Organovo's management team and consideration of the material terms proposed by these companies, the Organovo special committee ranked Tarveda and Companies G, H, I, J, K, M, and N as the top eight candidates and confirmed that these companies should be invited to participate in the next stage of the strategic alternatives process by attending in-person meetings with the Organovo special committee.

As part of the meeting on September 27, 2019, the Organovo special committee also discussed the latest proposal received from Company L, including Company L's request to enter into exclusive negotiations with Organovo. The Organovo special committee evaluated the information provided by Company L, utilizing the same criteria it used to evaluate the proposals it received from the other companies who had submitted indications of interest. Organovo's management team and representatives from Roth detailed their respective discussions with Company L regarding the request for Company L to sign a confidentiality and standstill agreement substantially equivalent to the form signed by the other companies participating in the strategic alternatives process. Organovo's management team also discussed Company L's refusal to agree to standstill

restrictions. Organovo's management team and the Organovo special committee then discussed the potential disruption and harm Company L could cause to the strategic alternatives process without standstill restrictions. At this meeting, Organovo's management team also reviewed Company L's separate proposal to license or acquire certain of Organovo's intellectual property and assets, which Company L had submitted in parallel with its acquisition proposal. The Organovo special committee then requested Organovo's management team to continue to offer Company L the opportunity to enter into a confidentiality and standstill agreement. Based on its evaluation of Company L's proposal, the Organovo special committee did not include Company L as one of the companies moving to the next stage in the strategic alternatives process. The Organovo special committee did decide to review and discuss Company L's proposal to license or acquire certain of Organovo's intellectual property and assets later in the strategic alternatives process.

Following the meeting of the Organovo special committee, representatives of Roth contacted the eight companies to confirm their attendance at, or to formally invite them to attend, the in-person meetings with the Organovo special committee on October 3 and 4, 2019.

On September 27, 2019, Company L communicated with the Organovo board of directors requesting to move to an exclusive negotiation around its acquisition proposal. Company L claimed that it had approached Organovo's stockholders and further claimed that stockholders holding more than 30% of Organovo's stock supported an acquisition by Company L. Company L, however, did not provide a list, or otherwise identify, the Organovo stockholders who allegedly supported a transaction with Company L. Further, neither Organovo's management team nor the Organovo board of directors were aware of any institutional or large stockholders who would be supportive of Company L's proposal.

Further, on September 27, 2019, Company L sent Organovo a proposal to license or acquire certain assets of Organovo in the event that Organovo did not accept Company L's proposal to acquire the whole company.

On October 1, 2019, Organovo's management team, based on input and guidance from the Organovo special committee, communicated with the chief executive officer of Company L that the Organovo special committee would consider Company L's proposal, and reiterating the request for Company L to sign a confidentiality and standstill agreement, as well as to submit a fully unredacted acquisition proposal.

On October 1, 2019, the chief executive officer of Company C communicated with Organovo's Chief Executive Officer indicating that Company C would not pursue the acquisition of Organovo patents due to competing priorities.

On October 1, 2019, Company L sent Organovo a revised acquisition proposal, unredacting certain information.

On October 2, 2019, Company L issued a press release announcing its proposal to acquire Organovo in a reverse merger transaction in which Organovo's stockholders would own up to 43% of the combined organization, depending on the final valuations negotiated.

On October 2, 2019, Company L communicated with the Organovo board of directors and special committee reiterating its belief that more than 30% of Organovo's stockholders supported Company L's proposal, and summarizing Company L's previous communications to the Organovo board of directors. Company L did not provide a list, or otherwise identify, the stockholders it alleged supported a deal with Company L. Further, after Company L's press release requesting Organovo stockholders to contact Organovo, Organovo did not receive communications from any institutional or other known large Organovo stockholder indicating its support for a transaction with Company L.

On October 3 and 4, 2019, the Organovo special committee conducted in-person meetings in San Diego, California with eight companies who had been previously invited by Roth at the direction of the Organovo

special committee: Tarveda and Companies G, H, I, J, K, M and N. A representative of Roth participated in the in-person meetings. Each company gave a presentation addressing: their business model; their lead products and pipeline products; their current and future financing needs and plans (including any proposed concurrent financings); their stage of development; the experience of their management teams; the timing of upcoming inflection points; their readiness to comply with public company requirements; validation of their technology and product candidates (as reflected by collaborations or investment by venture capital funds); and their short term business risks. The members of the Organovo special committee, management, and a representative of Roth had the opportunity to ask questions of the representatives of each company.

On October 6, 2019, Company L sent Organovo an email requesting to discuss Company L's proposal that Organovo contact its largest stockholders to confirm with them that "they want to make a deal happen with [Company L]."

On October 7, 2019, the Organovo special committee convened a meeting to discuss the in-person meetings conducted on October 3 and 4, 2019. Representatives of Organovo's management team and Roth participated in the meetings. The Organovo special committee first recapped the presentations by the eight companies, and discussed the criteria used to assess the strengths and weaknesses of the companies and their proposals, including:

- the economic terms offered by the target company, including the ownership percentage Organovo's existing stockholders would have in the combined organization, the valuation assigned to Organovo, the amount of capital the target company anticipated having at closing to support the future operations of the combined organization and the impact of any concurrent financing on the final ownership percentages of the combined organization;
- the target company's stage of development, with an emphasis on clinical or commercial stage assets;
- the target company's product portfolio and pipeline, with an emphasis on multiple products, multiple therapeutic indications across multiple clinical trials, and platforms capable of generating follow-on products for the clinic in the near-term;
- whether the target company possessed any validating collaborations, peer reviewed publications, distinctions or data, and/or investment by respected venture capital funds or strategic investors;
- the experience and strength of the management team of the target company, with an emphasis on successful entrepreneurs, public company experience, depth of management team, including a fulltime chief executive officer, a fulltime chief financial officer and heads of clinical development, regulatory and other critical departments;
- potential valuation inflection points with respect to the target company based on its technology and regulatory milestones achievable with the financial resources of the combined organization, with emphasis on transition to later stage clinical phases such as Phase 2 or 3 and/or commercialization;
- whether the target company was ready for a public company listing and that the company together with Organovo could satisfy the continued listing requirements of The Nasdaq Stock Market;
- other valuation considerations, including current and future financing needs and plans, short term business risks (e.g., contingent financings and funding risks, required licensing agreements, imminent FDA submissions, imminent data readouts); and
- whether the target company could meet its closing requirements, including target company stockholder approvals.

The Organovo special committee assessed each of the eight companies based on these criteria, and determined not to move forward in negotiations with Companies G, I, J, or M because each company had one or more of the following characteristics: (i) financing contingencies without the support of institutional investors;

(ii) management teams staffed on an interim basis or inability to articulate a credible business plan; (iii) lack of a U.S.-based infrastructure or near-term ability to comply with reporting requirements of the SEC and The Nasdaq Stock Market; or (iv) overly complicated governance and ownership structures.

The Organovo special committee concluded that Tarveda and Companies H, K, and N were strong candidates based on their in-person presentations, the material terms they had proposed and a lack of one of the characteristics noted above. The Organovo special committee then concluded that Organovo should move forward with negotiating term sheets and conducting additional diligence with Tarveda and Companies H, K, and N.

The Organovo special committee then discussed Company L's request that Organovo contact its stockholders to solicit their views on a merger with Company L. Organovo's management team confirmed that Organovo has existing relationships and communication channels with its largest known stockholders, and that Organovo had conducted meetings with those stockholders in August 2019 following the announcement of the strategic alternatives process. Organovo's management team confirmed that none of these large stockholders had contacted Organovo to support Company L's proposal. Based on this and the fact that the strategic alternatives process was still ongoing, the Organovo special committee concluded that initiating discussions with or polling stockholders regarding Company L's proposal would not be an appropriate exercise of its fiduciary duties.

On October 7, 2019, Organovo's legal counsel sent Company L a letter with a set of diligence items to be provided by Company L to enable the Organovo special committee to more fully evaluate Company L and its acquisition proposal.

On October 7, 2019, Roth informed Tarveda that Organovo wished to continue discussions with Tarveda and that a draft term sheet would be forthcoming. Tarveda corresponded with Roth confirming that the ownership split it had proposed took into account the $15 million in cash that it anticipated to have on its balance sheet at closing.

On October 7, 2019, Roth communicated to a representative of Company H that Organovo wished to continue discussions with Company H and that a draft term sheet would be forthcoming.

Between October 8 and October 10, 2019, Roth informed representatives of Companies G, I, J, and M that Organovo did not wish to continue discussions with them.

On October 9, 2019, Roth spoke to representatives of Company N and conveyed that Organovo wished to continue discussions with Company N and that a draft term sheet would be forthcoming. Roth provided a draft term sheet to Company N on behalf of Organovo.

On October 9, 2019, Roth spoke to a representative of Company K and conveyed that Organovo wished to continue discussions with Company K and that a draft term sheet would be forthcoming. Roth provided a draft term sheet to Company K on behalf of Organovo.

On October 10, 2019, Company L executed a confidentiality and standstill agreement. On October 10, 2019, representatives of Roth requested Company L to provide requested diligence items.

On October 11, 2019, Roth corresponded with a representative of Company H regarding certain diligence matters. Company H then submitted a revised draft term sheet. Company H also communicated that it would need to complete a private financing transaction prior to or concurrent with closing the transaction with Organovo.

On October 11, 2019, Roth corresponded with Tarveda regarding certain diligence matters.

On October 13, 2019, representatives of Company L were given access to Organovo's data room. Organovo and Company L corresponded regarding the scope of Company L's acquisition proposal.

On October 14, 2019, Company N provided a revised draft term sheet.

On October 14, 2019, Roth provided Company H with Organovo's revisions to the comments to the term sheet it had provided. Company H's comments were reviewed by Roth, Organovo's outside corporate counsel, Gunderson Dettmer, and Organovo's management team.

On October 14, 2019, Company K and Company N were given access to Organovo's data room.

On October 14, 2019, Company N provided Roth comments to the draft term sheet.

On October 14, 2019, the Organovo special committee convened a meeting held by teleconference to discuss the status of the term sheet discussions. Present at the meeting were Organovo's executive management team and representatives of Roth and Gunderson Dettmer.

On October 14, 2019, Organovo sent additional data room requests and supplemental diligence questions to Tarveda and Company H.

On October 15, 2019, representatives of Company K and Company N were given access to Organovo's data room.

On October 16, 2019, Company H sent Roth further proposed revisions to its term sheet.

On October 15, 2019, Roth spoke to a representative of Company H regarding Organovo's feedback on Company H's most recent term sheet and provided a revised draft term sheet to a representative of Company H.

On October 15, 2019, Roth communicated with a representative of Company K regarding the status of the term sheet.

On October 16, 2019, Roth had a discussion with Tarveda regarding Tarveda's intent to submit a revised term sheet for consideration by Organovo. Tarveda submitted a revised and updated term sheet to Roth following the discussion. Although not included in the revised term sheet, Tarveda suggested the concept of a mutual exclusivity period.

On October 16, 2019, Company H submitted a revised draft term sheet.

On October 17, 2019, Roth spoke with Company N about Organovo's revisions to its term sheet, and then provided Company N with a revised draft term sheet.

On October 17, 2019, a representative of Company K provided a revised draft term sheet.

On October 17, 2019, Organovo's executive management conducted a diligence call with representatives of Tarveda.

On October 17, 2019, Organovo's executive management conducted a diligence call with representatives of Company H.

On October 17, 2019, Company K sent proposed revisions to their term sheet.

On October 17, 2019, Organovo and Company L corresponded regarding Company L's proposals to acquire assets and regarding due diligence questions.

On October 18, 2019, Organovo provided a revised draft term sheet to Tarveda, and Tarveda corresponded with Roth confirming that Tarveda had approximately $5.5 million of cash on its balance sheet and that Tarveda expected that its current investors would support the proposed Merger by investing additional funds in Tarveda to enable it to meet the expectation of $15.0 million in cash on its balance sheet at closing.

On October 18, 2019, representatives of Company H corresponded with Organovo identifying due diligence items in Company H's data room and providing some additional explanations in response to diligence questions raised on the call with Organovo on October 17.

On October 18, 2019, Company N sent proposed revisions to their term sheet. Company N also provided letters of support from investors for $6.5 to $7.0 million of concurrent financing that it proposed would close concurrent with a closing of a transaction with Organovo.

On October 21, 2019, Company N provided a copy of its term sheet with a third party pursuant to which Company N would purchase such third party. Organovo's management and Company N's management discussed that Company N's acquisition of the third party would need to be completed prior to the signing of a definitive agreement with Organovo.

On October 22, 2019, representatives of Tarveda communicated to Roth that Tarveda's board of directors was requesting a 45-day exclusivity period. The parties then corresponded regarding the location of certain information in Organovo's data room.

On October 22, 2019, Roth communicated follow-up due diligence questions on behalf of Organovo to Company N. Company N provided written responses the same day.

On October 22, 2019, Company L provided Organovo with information on proposed comparables for its valuations. Company L also confirmed that it did not have a chief financial officer and did not have audited financial statements.

On October 22, 2019, the Organovo special committee met to discuss the status of Organovo's term sheet negotiations with Tarveda and Companies H, K, and N. In particular, the Organovo special committee considered the following:

- Tarveda. The Organovo special committee considered that Tarveda had improved the terms of its offer from an ownership split of 17.5%:82.5% to an ownership split of 25%:75% for Organovo and Tarveda, respectively. Based on a combined organization valuation of $200 million, Tarveda's proposal valued Organovo at $50 million (based on Organovo having at least $22.0 million in cash at closing), and valued Tarveda at $150 million (based on Tarveda having at least $15.0 million in cash at closing). The Organovo special committee additionally considered that the parties were able to come to agreement on the material terms of the Merger Agreement. The Organovo special committee also determined, among other items, the following: (i) Tarveda has a strong management team with public company and merger experience, and has been responsive in providing information in due diligence; (ii) Tarveda has multiple drug candidates, including two drug candidates currently in clinical development, each with multiple indications, (iii) Tarveda's technology and drug candidates have the potential to create value for Organovo's existing stockholders; (iv) Tarveda has high quality institutional investors who are willing to provide additional investment in Tarveda prior to close; and (v) Tarveda has an experienced, complete, and full-time dedicated management team and has demonstrated readiness to become a public company. The Organovo special committee also considered the development status of Tarveda's drug candidates, Tarveda's future product development plans, and the need for Tarveda to raise significant additional funds in the future to support its clinical development programs. The Organovo special committee also considered the anticipated cash the combined organization would have at closing, which is expected to provide sufficient funding to progress to clinical data read-outs, which

could lead to value inflection points and could support Tarveda's future fundraising and licensing efforts. Further, the Organovo special committee considered that although additional funding will be required, Tarveda's clinical programs are both in current Phase 1/2a clinical stage of development as compared to earlier-stage pharmaceutical companies with only pre-clinical or pre-IND development programs, which would also require significant additional funding without the benefit of clinical data. The Organovo special committee did note that Tarveda had proposed a breakup fee of $1.5 million, plus $300,000 for expenses, and requested representatives of Roth to attempt to negotiate a reduced breakup fee. The Organovo special committee also considered Tarveda's representation that its existing investors would support a financing prior to signing the Merger Agreement so that Tarveda would have $15.0 million at closing. The Organovo special committee requested Organovo's management team to conduct further diligence regarding the source of the additional funds.

- Company H. The Organovo special committee discussed that Company H had improved its proposed ownership split from 25%:75% to a proposed a 30%:70% split for Organovo and Company H, respectively, not including a concurrent contingent financing, which was targeted at $35 million but could be as large as $55 million. Based on a combined organization valuation of $100 million (before the concurrent financing), Company H's proposal valued Organovo at $30 million (based on Organovo having at least $22.0 million in cash at closing), and valued Company H at $70 million. During negotiations, Company H continued to take the position that any ownership split would be calculated prior to Company H conducting a concurrent financing, which would result in additional dilution to Organovo's existing stockholders as a result of the concurrent financing. The Organovo special committee considered that Company H had not secured a lead investor for its proposed concurrent financing, and as a result, the terms for the concurrent financing were unknown. Based on these factors, the Organovo special committee expressed concern about the concurrent financing, and the risk that Company H would not be able to secure at least $35 million required for closing the proposed strategic transaction. The Organovo special committee further discussed concerns that even with the concurrent financing, Company H would likely need to raise additional funds prior to obtaining additional clinical data that could be used by the combined organization to support an increased valuation before such financing.

- Company K. The Organovo special committee discussed that Company K had proposed an ownership split of 19.1%:80.9% for Organovo and Company K, respectively, after a $30 million concurrent contingent financing. Company K assigned a valuation of $29.5 for Organovo (based on Organovo having at least $22.0 million in cash at closing), and a valuation of $125.0 million for Company K (assuming Company K completed a $30 million financing prior to the closing). Company K had also proposed a period of 60 days exclusivity. The Organovo special committee considered that Company K had requested a number of closing conditions with respect to Organovo's net cash. The Organovo special committee expressed concerns regarding the fact that Company K had recently submitted an IND, and was awaiting feedback from FDA regarding whether it could proceed with its Phase 1 trial. The Organovo special committee determined that the potential that Company K may not receive FDA authorization for its IND or its IND could be significantly delayed or condition by the FDA created a significant short-term business risk that could put the closing of the proposed strategic transaction and concurrent financing in jeopardy.

- Company N. The Organovo special committee considered that Company N had proposed an ownership split of 23%:77% for Organovo and Company N, respectively, after a $15 million concurrent contingent financing. Company N assigned a valuation of $34 million for Organovo (based on Organovo having at least $22.0 million in cash at closing), and a valuation of $114 million for Company N (assuming Company N completed a $15 million financing prior to the closing). The Organovo special committee considered that Company N had provided letters of interest for $6 to $7 million of the proposed financing from investors. The Organovo special committee considered that Company N was still in the process of negotiating a licensing agreement with a third party, which comprised 50% of Company N's value under its proposal. The Organovo special committee discussed

the additional complexity involved in conducting due diligence regarding the proposed third party license, and the potential risk in the licensing agreement not being completed timely or on favorable terms, which could jeopardize the closing.

Based on a full consideration of the status of the term sheets with each of the companies, the risks and uncertainties, Organovo's due diligence and the factors identified by the Organovo special committee for purposes of evaluating, assessing and ranking each of the potential strategic alternative candidates, the Organovo special committee determined that it was in the best interests of Organovo and its stockholders for Organovo to move forward with finalizing and executing a term sheet with Tarveda.

The Organovo special committee then discussed Company L's proposal, and that Company L had proposed an ownership for Organovo's existing stockholders ranging from 40% to 43% of the combined organization based on Organovo's cash at closing. Company L valued itself at $60 million. Assuming a best case ownership of 43% and based on Company L's proposed valuation, Company L's proposal effectively valued Organovo at $45.3 million. The Organovo special committee also considered that the valuation of Company L underlying its proposal was calculated by Company L, and was not based on an investment in Company L's capital stock by institutional or professional investors. The Organovo special committee also considered that Company L had limited cash on hand, and did not plan to complete a concurrent financing in connection with the Merger. They also determined that given the early, preclinical development stage of Company L's potential drug targets, the combined organization would likely need to raise significant additional funding to support its development activities and business plans, which created financing risks and could cause significant future dilution to Organovo's existing stockholders until Company L achieved a meaningful value inflection point such as an IND submission for a potential drug candidate. The Organovo special committee also considered that: (i) Company L did not provide Organovo with scientific, third-party or peer-reviewed data concerning the viability of its two unspecified drug targets or its drug discovery platform; and (ii) Company L's proposed business model focused on Organovo's *in vitro* liver tissue models, the viability of which was questionable, and Organovo tissue models that had not achieved commercial acceptance.

The Organovo special committee, with input from Organovo's management team, then ranked Company L's proposal with respect to the same criteria used to rank all of the other companies who had submitted letters of interest to participate in the strategic alternatives process. Company L's overall ranking put it behind Tarveda, and behind Companies G, H, I, J, K, M, N, and several other companies the Organovo special committee had considered but not offered an opportunity to provide in-person presentations. Following a detailed discussion, the Organovo special committee determined that Company L's proposal was not competitive with the Tarveda proposal, or the other three proposals under consideration. In addition, the Organovo special committee determined that even if Company L had entered the strategic alternatives process in time for the selection of the eight potential bidders to make in-person presentations to the Organovo special committee, Company L would not have been selected for an in-person presentation. As a result, the Organovo special committee determined to recommend to the Organovo board of directors that it would not be in the best interests of Organovo or its stockholders to pursue a strategic transaction with Company L based on the terms offered.

On October 23, 2019, Tarveda sent further proposed revisions to its term sheet and requested additional due diligence information regarding Organovo's employee equity schedule. The companies exchanged information regarding the diligence request.

On October 23, 2019, the Organovo board of directors held a duly called meeting. Organovo's management team, the Organovo special committee and representatives from Roth reviewed the status of the Organovo strategic alternatives process, including Roth's outreach to more than 250 companies, the sending of confidential briefing materials to 49 companies, and the receipt of letters of interest from 27 companies. They then discussed with the Organovo board of directors the criteria utilized by Organovo's management team and the Organovo special committee to evaluate and rank each of the companies who had submitted letters of interest, and to select the top eight candidates to make in-person presentations. They then discussed the results of the in-person

meetings, including the decision by the Organovo special committee for Organovo to negotiate term sheets with Tarveda and three other candidates. They then discussed the term sheet negotiation process and results. The Organovo special committee then discussed its recommendation that it would be in the best interests of Organovo and its stockholders to attempt to finalize a term sheet with Tarveda. Following this discussion, and consideration of the recommendation by the Organovo special committee and the advice and feedback provided by Organovo's outside legal and financial advisors, the Organovo board of directors unanimously determined that pursuing and executing a term sheet with Tarveda was in the best interests of Organovo and its stockholders and authorized the Organovo special committee and management to negotiate and execute a final term sheet with Tarveda. The Organovo board of directors also directed management to inform Company L that its merger proposal had not been selected, but that as an alternative Organovo would be open to negotiating an asset purchase and/or licensing arrangement that would enable Company L to pursue its in vitro tissues research.

On October 23, 2019, representatives of Roth communicated to Company L that it was not a finalist in the strategic alternatives process.

On October 23, 2019, representatives of Company K contacted Roth for an update and discussed the status of the Organovo strategic alternatives process.

On October 24, 2019, Organovo provided a revised draft term sheet to Tarveda.

On October 24, 2019, representatives of Company H and Roth discussed Company H's progress in finding a lead investor for the concurrent private financing it would be required to complete.

On October 24, 2019, representatives of Organovo conducted a telephone conference with the chief executive officer of Company L regarding the various proposals he had submitted to acquire assets on behalf of Company L, himself personally, or on behalf of another entity.

On October 25, 2019, representatives of Tarveda contacted representatives of Roth and requested additional due diligence materials, including information regarding Organovo's insurance policies and updated net cash forecast, as well as a due diligence call with counsel to discuss certain diligence matters. Roth spoke to Tarveda regarding the status of the term sheet and provided Tarveda with Organovo's updated cash projection. Roth forwarded the requested insurance policy and net cash forecast information to Tarveda. The parties further corresponded with respect to scheduling the diligence call.

On October 28, 2019, representatives of Company K contacted representatives of Roth and advised that Company K's IND had been approved by the FDA. They also discussed the status of the draft term sheet.

On October 28, 2019, executives of Organovo and Tarveda, and their respective outside legal counsel, conducted a due diligence call regarding certain diligence matters. Following the diligence call, representatives of Tarveda and Roth discussed certain exclusivity carveouts.

On October 28, 2019, the Organovo special committee convened a meeting to discuss the status of the term sheet negotiations with Tarveda. Organovo's management team, Gunderson Dettmer, and Roth were present at the meeting. Following a detailed discussion, the Organovo special committee directed Organovo's management team and legal counsel to further revise the term sheet with Tarveda, and to pursue a final term sheet with Tarveda.

On October 28, 2019, Organovo's management team and Gunderson Dettmer revised the term sheet and Roth sent Tarveda the revised term sheet.

On October 28, 2019, Organovo sent Company L a proposed asset purchase and license agreement.

On October 29, 2019, Tarveda sent Organovo's management team a revised term sheet accepting all of Organovo's changes with one revision. The Organovo special committee agreed to accept Tarveda's revision and directed Organovo's Chief Executive Officer to execute the term sheet. The parties then exchanged executed copies of the term sheet.

On October 29, 2019, Company L sent proposed changes to the asset purchase and license agreement, and requested to add certain additional patents to the non-exclusive license. On October 30, 2019, Company L sent additional proposed changes to the asset purchase and license agreement.

On October 30, Roth informed Companies H, K, and N that Organovo had entered into an exclusivity period with another party.

On October 31, Roth sent Tarveda a draft Merger Agreement that had been prepared by Organovo's management team and Gunderson Dettmer.

On November 1, 2019, Company L sent Organovo a revised asset purchase and license agreement. The parties then exchanged emails regarding outstanding items and certain additional proposed changes to the agreement.

On November 4, 2019, Organovo sent Company L a final draft of the asset purchase and license agreement.

On November 4, 2019, Organovo conducted a due diligence call regarding Tarveda's intellectual property portfolio. Attendees included executives and outside counsel of each of the parties.

On November 5, 2019, given that Company L was considered to be a related party of Organovo under the SEC's rules and regulations due to Company L's chief executive officer being the former chief executive officer and chairman of Organovo, the Organovo audit committee reviewed the proposed agreement with Company L, pursuant to Organovo's Related Party Transactions Policy. The Organovo audit committee reviewed and approved the fairness of the proposed agreement. Thereafter, Organovo and Company L executed an asset purchase and non-exclusive license agreement.

On November 8, 2019, executives of Organovo and Tarveda, and representatives of Roth, conducted a telephone conference regarding the proposed timing for the remaining due diligence activities.

On November 8, 2019, Tarveda's outside counsel, Cooley, sent Gunderson Dettmer a set of proposed revisions to the Merger Agreement.

On November 11, 2019, Roth sent Tarveda a list of due diligence questions for Tarveda's auditor.

On November 11, 2019, the Organovo special committee convened a meeting with Organovo's management team, Gunderson Dettmer, and Roth to discuss updates regarding the status of the draft Merger Agreement.

Between November 8, 2019 and November 14, 2019, Organovo's management team, Gunderson Dettmer and Roth communicated regarding Tarveda's comments to the Merger Agreement.

On November 14, 2019, Gunderson Dettmer sent Cooley a set of proposed revisions to the Merger Agreement, and a draft support agreement.

On November 15, 2019, Organovo granted data room access to additional legal advisors of Tarveda.

On November 18, 2019, the Organovo special committee convened a meeting with Organovo's management team, Gunderson Dettmer and Roth to discuss updates regarding the status of the draft Merger Agreement and due diligence efforts.

On November 20, 2019, a due diligence call was conducted with Tarveda's external auditing firm. Attendees included representatives of management and outside legal counsel of each party.

On November 21, 2019, Cooley sent Gunderson Dettmer a set of proposed revisions to the Merger Agreement.

On November 22, 2019, representatives from Cooley and Gunderson Dettmer held a telephone conference to discuss Tarveda's comments to the Merger Agreement.

Between November 21, 2019 and November 25, 2019, Organovo's management team, Gunderson Dettmer and Roth communicated regarding Tarveda's remaining comments to the Merger Agreement.

On November 25, 2019, an update call was convened with representatives of Organovo, Tarveda and Roth. Each party gave an update regarding the status of its review of the draft Merger Agreement, preparation of its disclosure schedules, and progress toward drafting the registration statement on Form S-4. Tarveda's representatives gave an update regarding the status of their financing efforts. The parties discussed remaining due diligence items and the likely timeline for executing a Merger Agreement.

On November 25, 2019, the Organovo special committee convened a meeting to discuss an update on negotiations with Tarveda regarding the Merger Agreement and the related status of the transaction. Organovo's management team, Gunderson Dettmer and Roth attended the meeting.

On November 26, 2019, Gunderson Dettmer sent Cooley a set of Organovo's proposed revisions to the Merger Agreement.

On November 27, 2019, representatives of Roth and Tarveda held a telephone conference to discuss the status of Tarveda's financing efforts. Tarveda stated that three of its existing investors had committed to a total investment of $13 million. Tarveda also indicated that it was in the process of aligning its financial statements to a fiscal year end date of March 31 to match Organovo's fiscal year end.

On December 2, 2019, representatives of Roth corresponded with Tarveda regarding the status of Tarveda's financing efforts and expected timeline for closing its financing.

On December 2, 2019, representatives of Organovo and Tarveda held a telephone conference to discuss the current status of the draft Merger Agreement and anticipated timelines for executing the agreement and filing a Form S-4. In regard to the composition of the board of directors of the combined organization, Organovo's Chief Executive Officer indicated to Tarveda's Chief Executive Officer that the Chairman of the Organovo board of directors would lead Organovo's process of nominating two directors to serve on the board of the combined organization.

On December 3, 2019, Organovo's Chairman and Tarveda's Chief Executive Officer communicated regarding scheduling of a call to discuss board composition.

On December 5, 2019, representatives of Organovo and Tarveda held a telephone conference to discuss outstanding issues relating to the Merger Agreement. Tarveda also provided an update regarding the status of its financing.

On December 5, 2019, representatives of Gunderson Dettmer sent Cooley a draft of the lock-up agreement to be entered into with certain directors, officers and stockholders of Organovo and Tarveda.

On December 6, 2019, representatives of Organovo and Tarveda held a telephone conference to discuss outstanding issues regarding the Merger Agreement, and Tarveda's expected timeline to complete its financing. They further discussed a potential timeline to finalize and execute the Merger Agreement.

On December 9, 2019, Cooley sent Gunderson Dettmer a set of proposed revisions to the Merger Agreement.

On December 9, 2019, representatives of Organovo's management team and Roth provided the Organovo special committee with an update regarding the status of the draft Merger Agreement, the remaining outstanding issues, Tarveda's timeline to complete its financing, and a potential timeline to finalize and execute the Merger Agreement.

On December 9, 2019, Gunderson Dettmer sent Cooley a set of proposed revisions to the Merger Agreement.

On December 10, 2019, Cooley and Gunderson Dettmer held a telephone conference to discuss the status of the disclosure schedules.

On December 10, 2019, representatives of Organovo and Tarveda held a telephone conference regarding the status of the disclosure schedules and the plans for finalizing the Merger Agreement and announcing the Merger.

On December 11, 2019, the Organovo special committee and the Organovo board of directors held a joint telephonic meeting to discuss the proposed Merger. Organovo's management team and representatives from Roth and Gunderson Dettmer attended the meeting. Organovo's Chief Executive Officer started the meeting by reviewing Organovo's strategic alternatives process and the status of the Merger Agreement and the proposed Merger with Tarveda. Representatives of Organovo's management team, Roth and Gunderson Dettmer then presented the following topics:

- Representatives of Organovo's management team and Gunderson Dettmer provided a report regarding Organovo's due diligence review of Tarveda;
- Gunderson Dettmer reviewed materials regarding the fiduciary duties of the Organovo board of directors in connection with the consideration of the Merger transaction, including the duty to consider any potential interests of the Organovo officers and directors in the Merger;
- Gunderson Dettmer reviewed the key provisions of the Merger Agreement and the related transaction documents, including among other items: the Exchange Ratio, the calculation of Organovo's and Tarveda's respective outstanding capital stock and equity awards and their respective outstanding debt and cash at closing and potential adjustments to the Exchange Ratio based on these calculations, the non-solicitation provisions and fiduciary duty exceptions applicable to each of Organovo and Tarveda, the ability of the Organovo and Tarveda boards of directors to change their respective stockholder recommendations, termination provisions and related fee and expense reimbursement requirements, lock-up and voting agreements, and Tarveda's financing that it intended to complete on December 12, 2019; and
- Roth provided a summary of its financial analyses of the Merger consideration to date and stated that it expected to be able to deliver an opinion on December 12, 2019 after Tarveda completed its equity financing, that based upon the various assumptions, qualifications and limitations set forth therein, the Merger consideration is fair, from a financial point of view, to the Organovo stockholders.

Following these presentations, the members of the Organovo special committee and board of directors discussed and considered the following topics:

- Tarveda, its business and the terms of the proposed Merger, including a summary of the Tarveda equity financing expected to close on December 12, 2019;
- Organovo's strategic alternatives process and the strategic options that the Organovo special committee, the Organovo board of directors, Organovo's management team and Roth had previously explored;

- the various reasons to enter into the Merger Agreement with Tarveda; and
- the potential timeline to finalize the Merger Agreement and a communication plan for announcing the Merger to Organovo's stockholders.

On December 11, 2019, representatives of Organovo and Tarveda held a telephone conference to discuss the status of the Merger Agreement. Tarveda reported that the Tarveda board of directors had approved the Merger Agreement. Organovo reported that the Organovo board of directors had met to discuss the Merger Agreement in detail, and would further discuss the Merger Agreement at a meeting on the following day.

On December 12, 2019, the Organovo special committee held a meeting. Organovo's management team and representatives from Roth and Gunderson Dettmer participated in the meeting. Roth reviewed the financial analysis it conducted of the exchange ratio for the conversion of the Tarveda capital stock into Organovo common stock, including the procedures followed, assumptions made, matters considered and qualifications and limitations of the review undertaken by Roth in preparation of its fairness opinion. Roth then discussed the respective valuations for Organovo and Tarveda. A representative from Roth then rendered Roth's oral opinion that, as of the date of such opinion, and based upon the assumptions made, procedures followed, matters considered, and qualifications and limitations of the review set forth in its written opinion, the consideration to be paid by Organovo to holders of the shares of Tarveda common stock, as provided in the Merger Agreement with Tarveda, was fair to Organovo from a financial point of view. Following a discussion, the Organovo special committee recommended that the Organovo board of directors approve the Merger Agreement, the Merger and the related transactions.

On December 12, 2019, the Organovo board of directors met with the Organovo management team and representatives of Roth and Gunderson Dettmer as follows:

- the Organovo board of directors received a presentation from Roth regarding its financial analyses of the merger consideration and stating its oral opinion, to be confirmed in writing, that based upon the various assumptions, qualifications and limitations set forth therein, the merger consideration is fair, from a financial point of view, to the Organovo stockholders; and
- the Organovo special committee reported that it had met and approved a number of recitals and resolutions, including its recommendation that the Organovo board of directors approve the Merger Agreement, the Merger and the related transactions.

After further discussion, including the various of the factors discussed at the December 11, 2019 joint meeting of the Organovo special committee and the Organovo board of directors, the Organovo board of directors approved a number of recitals and resolutions, including among others, a unanimous determination that it was advisable and fair to, and in the best interests of Organovo and the Organovo stockholders to enter into the Merger Agreement and to complete the Merger and the related transactions.

Later on December 12, 2019, Roth delivered to the Organovo board of directors its written opinion, to the effect that and subject to the various assumptions and limitations set forth in its opinion, as of that date, the Merger consideration was fair, from a financial point of view, to the Organovo stockholders.

On December 12, 2019, representatives of Organovo, Tarveda, Gunderson Dettmer and Cooley held several telephone conferences to discuss the status of the Merger Agreement and the logistics for signing and announcing the Merger.

On December 13, 2019, Organovo and Tarveda executed the Merger Agreement. Representatives of Organovo and Tarveda held a telephone conference to further discuss the logistics for announcing the Merger Agreement.

Historical Background for Tarveda

Tarveda is a clinical stage biopharmaceutical company developing a new class of potent and selective precision oncology medicines, which it refers to as *Pentarin* miniature drug conjugates, for the treatment of patients with various solid tumor malignancies. Tarveda currently has two *Pentarin* miniature drug conjugates in clinical trials. Its first clinical program, PEN-866, is its initial candidate from its HSP90 binding miniature drug conjugate platform. HSP90 is a molecular chaperone that is highly activated in the harsh tumor environment across a wide range of solid tumor cancers, but which remains relatively dormant in normal tissue. PEN-866 is currently completing its Phase 1 dose escalation portion of its "all comers" trial of various types of solid tumors and is anticipating conclusion of this Phase 1 dose escalation study in the first quarter of 2020. Tarveda's second clinical program, PEN-221, is a *Pentarin* miniature drug conjugate currently in clinical evaluation for the treatment of patients with solid tumors expressing somatostatin receptor 2, or SSTR2, on the cell surface such as neuroendocrine tumors and small cell lung cancer. PEN-221 is a proprietary asset discovered in-house and is currently progressing through its Phase 2a trial.

In February 2019, Tarveda was invited to participate in a reverse merger process with Company V and discussed with its board of directors the approach of becoming a public company through a reverse merger. Tarveda engaged a financial advisor for reverse merger opportunities and submitted a proposal to Company V. Tarveda was informed in March 2019 that they were a runner-up for Company V. While no official direction from the board was provided, the members of the board indicated to management that the board would remain open to future reverse merger opportunities.

During the period March through July 2019, as part of routine meetings with several investment bankers including Roth, Tarveda's Chief Executive Officer informed them that if reverse merger opportunities were to become available where a public company had sufficient forecasted available cash at the time a merger would be expected to close that Tarveda would be interested in participating.

History of Strategic Alternatives Discussions and Significant Corporate Events

On August 13, 2019, a representative of Roth informed executives of Tarveda, Chief Executive Officer and of a potential reverse merger opportunity with Organovo, and circulated a non-confidential briefing document and the form of confidentiality and standstill agreement from Organovo.

On August 15, 2019, Mr. Roberts executed the confidentiality and standstill agreement with Organovo as provided by Roth, which was then countersigned and returned on the same day.

On September 5, 2019, Roth sent a bid instruction letter to Tarveda. The bid instruction letter detailed that Tarveda should provide background information regarding the company, including the company's business, products, development timelines, key employees, stockholders, projected financing needs, and key inflection points. The letters further requested information regarding the proposed transaction structure, the proposed valuation of each company and proposed ownership of the combined organization, the proposed capital structure, anticipated cash at closing, plan for Organovo's products and employees, due diligence requirements, and closing conditions, and that responses were due by September 19, 2019.

Thereafter, Tarveda's management team prepared the information requested by the bid letter and prepared a proposed transaction structure to present to the Tarveda board of directors for approval at the board meeting scheduled for September 19, 2019.

On September 16, 2019, Tarveda's Chief Executive Officer had a telephone conversation with a representative of Roth to discuss Tarveda's general standing in the bid process and to request an extension to the due date for the bid letter so that Tarveda's management team would have an opportunity to discuss the transaction proposal with the Tarveda board of directors. Roth provided an extension of the deadline for the bid proposal to September 24, 2019.

On September 19, 2019, Tarveda held a meeting of its board of directors, where Tarveda's management presented to the Tarveda board of directors an update on Tarveda's financial position including a more detailed discussion of the Tarveda's financing efforts, including various potential sources of cash such as follow on venture capital financings and the potential reverse merger project with Organovo. Tarveda's management provided the Tarveda board of directors with a high level overview of the bid proposal to be submitted, including key terms of the transaction and alternatives available to Tarveda if the Tarveda board of directors decided not to pursue the reverse merger with Organovo. A lengthy discussion ensued, during which directors provided feedback to management on the proposed bid. After discussion, the board directed management to proceed with the submission of the bid but also to continue to explore alternative financing options as well.

On September 24, 2019, after incorporating the feedback from the Tarveda board of directors, Tarveda's management delivered Tarveda's proposal to Roth. The proposal responded to the various items requested by Organovo in the September 5, 2019 bid process letter. The proposal bid detailed Tarveda's scientific programs including a description of the company's *Pentarin* miniature drug conjugate platform, HSP90 binding miniature drug conjugate platform, two clinical programs, PEN-866 and PEN-221, discovery efforts, clinical milestones and anticipated development timelines. The proposal also included general information of Tarveda's business including management, key investors, projected financing needs and key inflection points. Tarveda also provided information concerning the proposed transaction structure, the proposed valuation of each company and proposed ownership of the combined organization, the proposed capital structure including anticipated cash at closing and a plan for Organovo's products and employees, due diligence requirements, and closing conditions.

On September 25, 2019, Roth invited Tarveda's management to present to the Organovo special committee in person at a meeting scheduled for October 3, 2019. A representative of Roth indicated the presentation should elaborate on the bid process submission, including a detailed overview of the company and its programs, investment merits, management's experience and track record, historical and forward looking financial information, rationale for the proposed ownership split, readiness to be a public company and other general questions and comments.

On September 26, 2019, Organovo received access to Tarveda's data room, and Organovo provided access to its data room to Tarveda. On September 30, 2019, Roth sent several initial due diligence questions to members of Tarveda's management team, who answered those questions that same day.

On October 3, 2019, members of Tarveda's management met in person with the Organovo special committee in San Diego, California. A representative of Roth participated in the meetings in person. Tarveda gave a presentation to the special committee addressing its business model, lead products and pipeline products, its current and future financing needs and plans (including a proposed concurrent financing), stage of development, experience of its management team, timing of upcoming inflection points, readiness to comply with public company requirements, Tarveda's history of investment by venture capital funds, and short term business risks. The members of the Organovo special committee, management, and a representative of Roth asked Tarveda's management multiple questions during the presentation.

On October 7, 2019, Roth communicated to Tarveda that Organovo wished to continue discussions with Tarveda and that a draft term sheet would be forthcoming. Tarveda corresponded with Roth confirming that the proposed ownership split took into account the $15 million in cash that Tarveda anticipated to have on its balance sheet at closing.

On October 8, 2019, Roth sent an initial draft of the term sheet to Tarveda. The term sheet contained certain information intentionally left blank, which Tarveda was instructed to fill in as part of its revisions to the term sheet (including the proposed valuation of the two companies).

On October 11, 2019, Roth corresponded with Tarveda regarding certain additional diligence matters.

On October 13, 2019, Tarveda's management updated Tarveda's board of directors as to the status of the Organovo reverse merger project as well as to provide clinical and operational updates.

On October 14, 2019, Tarveda's management provided the Tarveda board of directors a further update that included the draft of the Organovo term sheet and a summary of the proposed changes to the term sheet, with the key changes centering around the valuation of the two companies and the termination provisions. On the same day, Tarveda's management held several phone calls with various members of the board to discuss the term sheet, proposed transaction structure and proposed revisions to the term sheet. The Tarveda board of directors indicated support to move forward with submitting a revised term sheet in line with Tarveda's management's proposals.

On October 16, 2019, Roth had a discussion with Tarveda regarding Tarveda's intent to submit a revised term sheet for consideration by Organovo. Tarveda submitted a revised and updated term sheet to Roth following the discussion, which included a proposed valuation of the two companies and revisions to the termination provisions. Although not included in the revised term sheet, Tarveda suggested the concept of a mutual exclusivity period.

On October 17, 2019, Organovo's executive management conducted a diligence call with Tarveda's executive management.

On October 18, 2019, Organovo provided a revised draft term sheet to Tarveda, and Tarveda corresponded with Roth confirming that Tarveda had approximately $5.5 million of cash on its balance sheet and that Tarveda expected that its current investors would support the merger and that they would be likely to provide additional funding to Tarveda in order to meet the expectation of $15.0 million in cash on Tarveda's balance sheet at closing.

On October 22, 2019, representatives of Tarveda communicated to Roth that Tarveda's board was requesting a 45-day exclusivity period. The parties also discussed certain information in Organovo's data room.

On October 23, 2019, representatives of Tarveda sent a revised term sheet to representatives of Organovo, containing an exclusivity provision, and requested additional diligence information regarding Organovo's employee equity schedule.

On October 23, 2019, a call was held by Tarveda's management with the members of the Tarveda board of directors representing entities affiliated with Novo Holdings A/S, Versant Ventures and NanoDimension, in order to determine if the investor members were willing to invest capital of $13.0 million in Tarveda in a preferred stock financing that would close ahead of the signing of a definitive merger agreement.

On October 24, 2019, Organovo provided a revised draft term sheet to Tarveda, accepting the proposed valuation of the companies and revising certain terms relating to exclusivity.

On October 25, 2019, the members of Tarveda's board of directors affiliated with Novo Holdings A/S, Versant Ventures and NanoDimension each confirmed that he had received confirmation that his associated investor entities would be willing to support the reverse merger with a commitment of $13 million in a preferred stock financing that would close ahead of the signing of the definitive merger agreement.

On October 25, 2019, representatives of Tarveda contacted representatives of Roth and requested additional diligence materials, including information regarding Organovo's insurance policies and updated net cash forecast, as well as a diligence call with counsel to discuss certain diligence matters. Roth spoke to Tarveda regarding the status of the term sheet and provided Tarveda with Organovo's updated cash projection.

On October 28, 2019, executives of Organovo and Tarveda, and their respective outside legal counsel, conducted a diligence call regarding diligence matters. Following the diligence call, representatives of Tarveda and Roth discussed certain exclusivity carveouts.

On October 28, 2019, Organovo's management team and legal counsel revised the term sheet and Roth sent Tarveda the revised term sheet containing certain changes to the termination provision that had been requested by Tarveda.

On October 29, 2019, Tarveda's management held a telephonic call of the Tarveda board of directors to discuss the latest Organovo term sheet. Tarveda's management also provided the board with updates on due diligence, the status of the Organovo stockholder lawsuit and the various term sheet revisions. After discussion, where the board considered the terms of the proposed merger, the value to Tarveda's stockholders if the merger were completed (including the prospect of Tarveda's stockholders receiving shares in a publically traded company), the readiness of Tarveda's management to comply with the requirements of a reporting company, and the alternative options available to Tarveda, the Tarveda board of directors, via a unanimous vote, approved the signing of the Organovo term sheet.

On October 29, 2019, Tarveda sent Organovo's management team a revised term sheet that accepted all of Organovo's changes except for one revision on the standard for the type of transaction that would constitute a superior offer. The Organovo special committee agreed to accept Tarveda's revision and directed Organovo's Chief Executive Officer to execute the term sheet. The parties then exchanged executed copies of the term sheet, which, among other things, valued Organovo at $50.0 million and Tarveda at $150.0 million, proposed a reverse merger transaction whereby Tarveda's stockholders would end up holding 75% of Organovo following the consummation of the merger (subject to certain adjustments based on the amount of Organovo net cash, Organovo and Tarveda debt and changes in the capitalization of Organovo or Tarveda prior to the consummation of the Merger), contained a 45-day exclusivity provision for entering into the definitive merger agreement, and contained terms relating to the circumstances under which the parties would be able to terminate the proposed merger transaction (including the accompanying fees in the event of any termination by either party).

On October 31, 2019, Roth sent Tarveda a draft Merger Agreement that had been prepared by Organovo's management team and Gunderson Dettmer.

On November 4, 2019, a due diligence call was conducted regarding Tarveda's intellectual property portfolio. Attendees included executives and outside counsel of each of the parties.

On November 8, 2019, executives of Organovo and Tarveda, and representatives of Roth, conducted a telephone conference regarding timing for planned due diligence activities.

On November 8, 2019, Tarveda's outside counsel, Cooley, sent Gunderson Dettmer a set of proposed revisions to the merger agreement.

On November 11, 2019, Roth sent Tarveda a list of diligence questions for Tarveda's auditor.

On November 14, 2019, Gunderson Dettmer sent Cooley a set of proposed revisions to the Merger Agreement, and a draft support agreement.

On November 15, 2019, Organovo granted data room access to additional legal advisors of Tarveda.

On November 20, 2019, a due diligence call was conducted with Tarveda's external auditing firm. Attendees included representatives of management and outside legal counsel of each party.

On November 21, 2019, Cooley sent Gunderson Dettmer a set of proposed revisions to the Merger Agreement.

On November 22, 2019, representatives from Cooley and Gunderson Dettmer held a telephone conference to discuss Tarveda's latest comments to the Merger Agreement.

On November 25, 2019, an update call was convened with representatives of each party's management and Roth. Each party gave an update regarding the status of its review of the draft Merger Agreement, preparation of its disclosure schedules, and progress toward drafting the S-4. Tarveda's representatives gave an update regarding the status of their financing efforts. The parties discussed remaining diligence items and likely timeline for executing a Merger Agreement.

On November 26, 2019, Gunderson Dettmer sent Cooley a set of proposed revisions to the Merger Agreement.

On November 27, 2019, representatives of Roth and Tarveda held a telephone conference to discuss the status of Tarveda's financing efforts. Tarveda stated that three investors had committed to a total investment of $13 million. Tarveda also indicated that it is in the process of aligning its financial statements to a fiscal year end date of March 31.

On December 2, 2019, representatives of Roth communicated with Tarveda regarding the status of Tarveda's financing efforts and expected timeline for closing the financing.

On December 2, 2019, representatives of Organovo and Tarveda held a telephone conference to discuss the current status of the draft Merger Agreement and anticipated timelines for executing the agreement and filing a registration statement on Form S-4. In regard to the composition of the board of directors of the combined organization, Organovo's Chief Executive Officer indicated to Tarveda's Chief Executive Officer that the Chairman of the Organovo board of directors would lead Organovo's process of nominating the two Organovo-appointed directors to serve on the board of the combined organization.

On December 3, 2019, Organovo's Chief Executive Officer, and Tarveda's Chief Executive Officer and Chairman corresponded with respect to the scheduling of a call to discuss board composition between Tarveda's Chief Executive Officer and Chairman and the chairman of Organovo, who would be leading discussions around potential Organovo representatives to participate on the Board of the combined organization.

On December 5, 2019, representatives of Organovo and Tarveda held a telephone conference to discuss outstanding issues relating to the Merger Agreement. Tarveda also provided an update regarding the status of its financing.

On December 5, 2019, representatives of Gunderson Dettmer sent Cooley a draft of the lock-up agreement to be entered into with certain directors, officers and stockholders of Organovo and Tarveda.

On December 5, 2019, Tarveda held a regularly scheduled board meeting. Management provided an update as to the status of the preferred stock financing including the planned closing of the rights offering period on December 6, 2019 and the planned closing of the preferred stock financing on December 12, 2019. Management then discussed the key terms and remaining open items on the Merger Agreement. Key open items included updating the Merger Agreement for Tarveda equity information related to Tarveda's Series 1 Preferred Stock scheduled to close on December 12, 2019, completion of disclosures schedules and final negotiations related to termination provisions of the agreement. Tarveda's management stated their intent to sign the Merger Agreement on either December 12 or December 13, 2019, subject to the approval of the Tarveda board of directors.

On December 6, 2019, representatives of Organovo and Tarveda held a telephone conference to discuss outstanding issues regarding the Merger Agreement and Tarveda's expected timeline to complete its financing. They further discussed a potential timeline to finalize and execute the Merger Agreement.

On December 6, 2019, Cooley sent Gunderson Dettmer a set of proposed revisions to the Merger Agreement.

On December 6, 2019, the Chief Executive Officer and Chairman of Tarveda and the Chairman of Organovo held a call to discuss potential Organovo representatives to participate on the Board of the merged company.

On December 9, 2019, Cooley sent Gunderson Dettmer a set of proposed revisions to the support agreement.

On December 10, 2019, Gunderson Dettmer sent Cooley a set of proposed revisions to the Merger Agreement.

On December 10, 2019, Cooley sent Gunderson Dettmer a set of proposed revisions to the lock-up agreement.

On December 10, 2019, Cooley and Gunderson held a telephone conference to discuss certain comments on the disclosure schedules of both parties.

On December 10, 2019, representatives of Organovo and Tarveda held a telephone conference regarding the disclosure schedules and the plans for finalizing the Merger Agreement and announcing the Merger.

On December 11, 2019, the Tarveda board of directors held a meeting wherein management provided the directors with an update on the status of the Merger and the preferred stock financing. The Tarveda board of directors approved the preferred stock financing.

On December 11, 2019, representatives of Organovo and Tarveda held a telephone conference to discuss the status of the Merger Agreement. Organovo reported that the Organovo board of directors had met to discuss the Merger Agreement in detail and would further discuss the Merger Agreement at a meeting on the following day.

On December 11, 2019, Cooley sent Gunderson Dettmer a set of proposed revisions to the Merger Agreement.

On December 12, 2019, representatives of Organovo, Tarveda and Gunderson Dettmer and Cooley held several telephone conferences to discuss the status of the Merger Agreement and the logistics for signing and announcing the Merger. Cooley and Gunderson Dettmer exchanged various revisions to the Merger Agreement, reflecting the outcome of these discussions.

On December 13, 2019, the Tarveda board of directors executed a board consent approving the Merger.

On December 13, 2019, Organovo and Tarveda executed the Merger Agreement. Representatives of Organovo and Tarveda held a telephone conference to further discuss the logistics for announcing the Merger Agreement.

On December 16, 2019 at 8:00 AM Eastern standard time, Organovo and Tarveda jointly issued a press release announcing the signing of the definitive Merger Agreement.

Organovo Reasons for the Merger

The Organovo board of directors considered the following factors, among others, in reaching its conclusion to approve and adopt the Merger Agreement, the Merger, the issuance of shares of Organovo common stock in the Merger and the other transactions contemplated thereby and to recommend that the Organovo stockholders approve the Merger Agreement, the Merger, the issuance of shares of Organovo common stock in the Merger and the other transactions contemplated by the Merger Agreement:

- The Organovo board of directors considered the economic terms offered by Tarveda, including the ownership percentage Organovo's existing stockholders would have in the combined organization, the

valuation assigned to Organovo, and the anticipated amount of cash Tarveda would have at the closing of the Merger to support the future operations of the combined organization.

- The Organovo board of directors determined, based in part on the judgment, advice and analysis of the Organovo management team with respect to the potential benefits of the Merger (which judgment, advice and analysis was informed in part on the business, intellectual property, regulatory, financial, accounting and legal due diligence investigation performed with respect to Tarveda), that:
  - the development of Tarveda's new class of precision oncology medicines for the treatment of patients with various solid tumor malignancies has potential to create value for the current Organovo and Tarveda stockholders;
  - Tarveda's product discovery platform has the potential to generate additional promising clinical candidates over time;
  - Tarveda's executive leadership team, which has extensive experience launching multiple drugs with other pharmaceutical and biotech companies, as well as broad public company management experience, will enable the combined organization to reach significant value inflection points;
  - Tarveda has a significant intellectual property position supporting the commercialization of its products;
  - Tarveda has delivered support agreements from certain of its officers, directors and 5% or greater stockholders, representing approximately 95% of Tarveda's outstanding capital stock on an as-converted to common stock basis, in which each such individual or entity has agreed to vote in favor of the Merger Agreement and the related transactions. In addition, Tarveda has agreed to submit written consents from a sufficient number of stockholders to approve the Merger Agreement and the related transactions within ten business days of the effectiveness of this Registration Statement;
  - the combined organization will be able to satisfy the initial listing application requirements of Nasdaq and to maintain Organovo's Nasdaq listing; and
  - Tarveda has the ability to enter into an agreement for a combination and thereafter proceed in an orderly manner toward implementing the combination.
- The Organovo board of directors also reviewed with the management of Organovo the current operating plans of Tarveda to confirm the likelihood that the combined organization would possess sufficient financial resources to allow the management team to focus on implementing Tarveda's business plan and growing Tarveda's business.
- The Organovo board of directors also considered the following factors with respect to the proposed combined organization in reaching its conclusion to approve and adopt the Merger Agreement and the related transactions and to recommend that the Organovo stockholders approve the Merger, adopt the Merger Agreement and approve the related transactions, including the issuance of shares of Organovo common stock in the Merger and change in control of Organovo:
  - the Organovo board of directors also considered the ability of Tarveda to take advantage of the potential benefits resulting from becoming a public reporting listed on the Nasdaq Stock Market should it be required to raise additional equity or debt in the future;
  - the Organovo board of directors considered the opportunity as a result of the Merger for Organovo stockholders to participate in the potential increase in value that may result as Tarveda continues to invest in pursuing its business plan and growing its business following the Merger; and
  - the Organovo board of directors considered the analysis of Roth, and the opinion Roth provided to the Organovo board of directors as to the fairness to Organovo's existing stockholders, from a financial point of view and as of the date of such opinion, of the consideration to be paid by Organovo to the holders of Tarveda capital stock, as more fully described below under the caption "*The Merger — Opinion of Organovo's Special Committee's Financial Advisor*."

- The Organovo board of directors also reviewed various factors impacting the financial condition, results of operations and prospects for Organovo, including:
  - the strategic alternatives to the Merger available to Organovo, including the discussions that Organovo's management team and the Organovo board of directors and the Organovo special committee previously conducted with other potential merger partners;
  - the consequences of the negative assessment of Organovo's lead liver therapeutic tissue program;
  - the inability of Organovo's existing commercial, partnering and revenue streams to operate on a break even basis or to help support the significant costs of Organovo's development activities and plans;
  - the inability of Organovo to enter into an agreement with its existing and potential collaborators and partners that would enable Organovo to generate sufficient funds support its operations and business plans and the limited financial terms these collaborators and partners offered to acquire or license Organovo's intellectual property
  - the risks and delays associated with, and uncertain value and costs to Organovo stockholders of, liquidating Organovo, including the uncertainties of continuing cash burn while contingent liabilities are resolved, uncertainty of timing of release of cash until contingent liabilities are resolved, and the risks associated with being a shell company prior to cash distribution, including the risks associated with delisting;
  - Organovo's prospects to raise the significant amount of funds it would require to continue to the development of its therapeutic pipeline assets, including stem cell based tissue programs, to potentially reach an IND filing status within an acceptable investment horizon;
  - the risks and challenges of attempting to continue to operate Organovo on a stand-alone basis, including the early development stage of Organovo's, and its collaborators', potential therapeutic and commercial product candidates and the significant time and amount of additional financial resources that would be required to pursue further development, seek regulatory approvals and commence commercialization activities with no ultimate assurance that such activities would be successful or enable Organovo to operate a profitable business; and
  - the challenges of maintaining Organovo's listing on the Nasdaq Stock Market without completing the Merger.

The Organovo board of directors also reviewed the terms and conditions of the proposed Merger Agreement and the contemplated transactions, as well as the safeguards and protective provisions included therein intended to mitigate risks, including:

- the fact that immediately following the consummation of the Merger, Tarveda stockholders, warrantholders and optionholders will own approximately 75% of the Organovo common stock on a fully diluted basis as defined in the Merger Agreement, with Organovo stockholders, optionholders and warrantholders, whose shares of Organovo common stock will remain outstanding after the Merger, holding approximately 25% of the Organovo Stock on a fully diluted basis as defined in the Merger Agreement, subject to adjustment;
- the final Exchange Ratio used to establish the number of shares of Organovo common stock to be issued in the Merger is based upon Organovo's and Tarveda's capitalization at the signing of the Merger Agreement, and will be adjusted based on the amount of Organovo net cash, Organovo and Tarveda debt and changes in the capitalization of Organovo or Tarveda prior to the Closing;
- Tarveda's completion of a financing that will enable it to comply with the closing condition to have at least $15.0 million in cash at the closing of the Merger;

- the limited number and the nature of the conditions to Organovo's obligation to consummate the Merger and the limited risk of non-satisfaction of such conditions as well as the likelihood that the Merger will be consummated on a timely basis;
- the limitations on Tarveda under the Merger Agreement to consider certain unsolicited acquisition proposals under certain circumstances should it receive a superior proposal;
- the reasonableness of the potential termination fee being $1.0 million (or $2.0 million in certain circumstances) and related reimbursement of certain transaction expenses of up to $0.3 million (or $0.5 million in certain circumstances), which could become payable by either Organovo or Tarveda if the Merger Agreement is terminated in certain circumstances;
- the support agreements, pursuant to which certain stockholders including certain directors and executive officers and 5% and greater stockholders of Tarveda agreed, solely in their capacity as stockholders, to execute a written consent vote voting all of their shares of Tarveda capital stock (a) in favor of (i) the adoption of the Merger Agreement and approval of the transactions contemplated by the Merger Agreement, (ii) approval of any proposal to adjourn or postpone a meeting of the Tarveda stockholders to a later date, if there are not sufficient votes for the adoption of the Merger Agreement and the approval of the transaction completed by the Merger Agreement on the date on which such meeting is held or and (iii) any other matter necessary to consummate the transactions contemplated by the Merger Agreement and (b) against any "acquisition proposal" as defined in the Merger Agreement;
- the agreement of Tarveda to provide written consent of its stockholders necessary to adopt the Merger Agreement thereby approving the Merger and related transactions within ten business days of the Registration Statement, of which this proxy statement/prospectus/information statement is a part, becoming effective; and
- the belief that the terms of the Merger Agreement, including the parties' representations, warranties and covenants, and the conditions to their respective obligations, are reasonable under the circumstances.

In the course of its deliberations, the Organovo board of directors also considered a variety of risks and other countervailing factors related to the Merger and the transactions contemplated by the Merger Agreement, including:

- the risk to Organovo's financial results in the event that the Merger is not consummated, including the risk of Organovo needing to cease operations;
- the termination fee of $1.0 million (or $2.0 million in certain circumstances), and related reimbursement of certain transaction expenses of up to $0.3 million (or $0.5 million in certain circumstances) and the potential effect of such termination fee in deterring other potential acquirers from proposing an alternative transaction that may be more advantageous to Organovo stockholders;
- the risk that the Exchange Ratio will be adjusted if Organovo's net cash at Closing is reduced resulting in current Organovo equity holders owning a smaller percentage of the combined organization after Closing;
- the substantial expenses to be incurred in connection with the Merger and obtaining the necessary approval from the Organovo stockholders;
- the possible volatility, at least in the short-term, of the trading price of Organovo common stock resulting from the announcement of the Merger;
- the risk that the Merger might not be consummated in a timely manner or at all and the potential adverse effect of the public announcement of the Merger or on the delay or failure to complete the Merger on the reputation of Organovo;
- the strategic direction of the combined organization following the completion of the Merger, which will be determined by a board of directors initially designated substantially by Tarveda; and

- various other risks associated with the combined organization and the Merger, including those described in the section titled "*Risk Factors*" in this proxy statement/prospectus/information statement.

The foregoing information and factors considered by the Organovo board of directors are not intended to be exhaustive but are believed to include all of the material factors considered by the Organovo board of directors. In view of the wide variety of factors considered in connection with its evaluation of the Merger and the complexity of these matters, the Organovo board of directors did not find it useful to attempt, and did not attempt, to quantify, rank or otherwise assign relative weights to these factors. In considering the factors described above, individual members of the Organovo board of directors may have given different weight to different factors. The Organovo board of directors conducted an overall analysis of the factors described above, including thorough discussions with, and questioning of, the Organovo management team, the Organovo special committee and the legal and financial advisors of Organovo, and considered the factors overall to be favorable to, and to support, its determination.

Tarveda Reasons for the Merger

The following discussion sets forth material factors considered by the Tarveda board of directors in reaching its determination to approve the terms and authorize the execution of the Merger Agreement for the purpose of implementing the Merger; however, it may not include all of the factors considered by the Tarveda board of directors. In light of the number and wide variety of factors considered in connection with its evaluation of the Merger Agreement, the Tarveda board of directors did not consider it practicable to, and did not attempt to, quantify or otherwise assign relative weights to the specific factors it considered in reaching its determination. The Tarveda board of directors viewed its position and determinations as being based on all of the information available and the factors presented to and considered by it. In addition, individual directors may have given different weight to different factors.

In the course of reaching its decision to approve the Merger, the board of directors of Tarveda consulted with its senior management, financial advisor and legal counsel, reviewed a significant amount of information and considered a number of factors, including, among others:

- historical and current information concerning Tarveda's business, including its financial performance and condition, operations, management and competitive position;
- Tarveda's prospects if it were to remain an independent company, including its need to obtain additional financing and the terms on which it would be able to obtain such financing, if at all;
- the potential increased access to sources of capital at a lower cost and a broader range of investors to support Tarveda's clinical development efforts than it could otherwise obtain if it continued to operate as a privately-held company;
- the potential to provide its current stockholders with greater liquidity by owning stock in a public company;
- the Tarveda board of director's belief that the various alternatives to the Merger that were considered by the Tarveda board of directors of Tarveda were not reasonably likely to create greater value for Tarveda's stockholders;
- the cash resources of the combined organization expected to be available at the closing of the Merger;
- the expectation that the Merger would be a more time- and cost-effective means to access capital than other options considered;
- the expectation that substantially all of Tarveda's employees, particularly its management, will serve in similar roles at the combined organization;
- the preference of the principal investors to fund Tarveda's business as part of a process pursuant to which Tarveda would become a public company;

- the terms and conditions of the Merger Agreement, including, without limitation, the following:
  - the determination that the expected relative percentage ownership of Organovo securityholders and Tarveda securityholders in the combined organization was appropriate based, in the judgment of the board of directors of Tarveda, on the board of directors' assessment of the approximate valuations of Organovo and Tarveda and the comparative costs and risks associated with alternatives to the Merger;
  - the expectation that the Merger will be treated as a reorganization for U.S. federal income tax purposes, with the result that the Tarveda stockholders will generally not recognize taxable gain or loss for U.S. federal income tax purposes upon the exchange of Tarveda common stock for Organovo common stock pursuant to the Merger;
  - the limited number and nature of the conditions of the obligation of Organovo to consummate the Merger;
  - the rights of Tarveda under the Merger Agreement to consider certain unsolicited acquisition proposals under certain circumstances should Tarveda receive a superior proposal;
  - the conclusion of the board of directors of Tarveda that the potential termination fee which is equal to $1.0 million (or $2.0 million in certain circumstances) plus the reimbursement of certain transaction expenses incurred in connection with the merger of up to $0.3 million (or $0.5 million in certain circumstances), payable by Organovo to Tarveda and the circumstances when such fee may be payable, were reasonable;
- the fact that shares of Organovo common stock issued or issuable to Organovo stockholders will be registered on a Form S-4 registration statement by Organovo and will become freely tradable for Tarveda; and
- the likelihood that the Merger will be consummated on a timely basis.

Tarveda's board of directors also considered a number of uncertainties and risks in its deliberations concerning the Merger and the other transactions contemplated by the Merger Agreement, including the following:

- the possibility that the Merger might not be completed and the potential adverse effect of the public announcement of the Merger on the reputation of Tarveda and the ability of Tarvedato obtain financing in the future in the event the Merger is not completed;
- the termination fee which is equal to $1.0 million (or $2.0 million in certain circumstances) plus the reimbursement of certain transaction expenses incurred in connection with the Merger of up to $0.3 million (or $0.5 million in certain circumstances), payable by Tarveda to Organovo upon the occurrence of certain events, and the potential effect of such termination fee in deterring other potential acquirers from proposing an alternative transaction that may be more advantageous to Tarveda's stockholders;
- the risk that the Merger might not be consummated in a timely manner or at all;
- the potential reduction of Organovo's net cash prior to closing of the Merger;
- the risk that Tarveda will not have the $15.0 million dollars minimum cash required for the closing of the Merger;
- the expenses to be incurred in connection with the Merger and related administrative challenges associated with combining the companies;
- the possibility that Organovo could under certain circumstances consider unsolicited acquisition proposals if superior to the Merger;

- the additional public company expenses and obligations that Tarveda's business will be subject to following the Merger that it has not previously been subject to; and
- various other risks associated with the combined organization and the Merger, including the risks described in the section titled "*Risk Factors*" in this proxy statement/prospectus/information statement.

The Tarveda board of directors weighed the benefits, advantages and opportunities of a potential transaction against the uncertainties and risks described above, as well as the possible diversion of management attention for an extended period of time. After taking into account these and other factors, the Tarveda board of directors approved the terms and authorized execution of the Merger Agreement for the purpose of implementing the Merger.

Opinion of Organovo's Special Committee's Financial Advisor

On December 12, 2019, Roth rendered an oral opinion to the Organovo special committee (which was confirmed in writing by delivery of Roth's written opinion dated December 12, 2019), to the effect that, as of December 12, 2019 based upon and subject to the procedures followed, assumptions made, qualifications and limitations on the review undertaken and other matters considered by Roth in preparing its opinion, the merger consideration to be paid by Organovo to holders of the shares of Tarveda common stock (other than shares held in the treasury of Tarveda, shares held by Organovo or Merger Sub and any dissenting shares) in the Merger was fair, from a financial point of view, to Organovo.

Roth's opinion was directed to the Organovo special committee and only addressed the fairness from a financial point of view to Organovo of the merger consideration to be paid by Organovo to the holders of the shares of Tarveda common stock (other than shares held in the treasury of Tarveda, shares held by Organovo or Merger Sub and any dissenting shares) in the Merger and does not address any other aspect or implication of the Merger. The summary of Roth's opinion in this proxy statement/prospectus/information statement is qualified in its entirety by reference to the full text of its written opinion, which is included as Annex B to this proxy statement/prospectus/information statement and sets forth the procedures followed, assumptions made, qualifications and limitations on the review undertaken and other matters considered by Roth in preparing its opinion. The opinion did not address the relative merits of the Merger as compared to any alternative business strategies or transactions that might be available for Organovo, Tarveda, or any other party, nor did it address the underlying business decision of the Organovo special committee, the Organovo board of directors, Organovo, its securityholders, Tarveda, its securityholders or any other party or entity to proceed with or effect the Merger or any terms or aspects of any voting or other agreements to be entered into in connection with the Merger. Roth's opinion should not be construed as creating any fiduciary duty on Roth's part to any party or entity. Roth's opinion and the summary of its opinion and the related analyses set forth in this proxy statement are not intended to be, and do not constitute, advice or a recommendation to the Organovo special committee or the Organovo board of directors or any stockholder of either Organovo or Tarveda as to how to act or vote with respect to the Merger or related matters.

In arriving at its opinion, Roth:

- reviewed and analyzed certain information, including financial forecasts, relating to the estimated cash usage of each of Organovo and Tarveda, on stand-alone bases, that were furnished by Organovo and Tarveda;
- discussed the foregoing matters with senior executives of Organovo and Tarveda;
- reviewed the pro forma ownership structure of the combined organization resulting from the Merger;
- discussed the past and current operations, financial condition and the prospects of Organovo and Tarveda with senior executives of Organovo and Tarveda, respectively;

- reviewed the reported prices and trading activity for Organovo common stock;
- compared certain publicly available information of certain other publicly-traded companies deemed relevant;
- reviewed the financial terms, to the extent publicly available, of certain comparable acquisition and financing transactions deemed relevant;
- participated in certain discussions with representatives of the Organovo special committee and its legal advisors;
- reviewed the draft Merger Agreement dated December 9, 2019; and
- performed such other analyses, reviewed such other information and considered such other factors as deemed appropriate.

For its opinion, Roth assumed and relied upon, without independent verification, the accuracy and completeness of the information that was publicly available or supplied or otherwise made available to it by Organovo and Tarveda, which formed a substantial basis for such opinion, and further relied upon the assurances of Organovo's management team that such information did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements contained therein not misleading in any material respect. With respect to the financial projections, Roth was advised by management of Organovo and Tarveda and assumed that they were reasonably prepared on bases reflecting the best currently available estimates and judgments of the management of Organovo and Tarveda of the future financial performance of Organovo and Tarveda, as the case may be, and Roth expressed no view as to the assumptions on which they are based. In addition, Roth assumed that the final executed Merger Agreement would not differ in any material respect from the draft Merger Agreement reviewed by Roth, and that the Merger would be consummated in accordance with the terms set forth in the Merger Agreement without any waiver, amendment or delay of any terms or conditions. Roth also assumed that in connection with the receipt of all the necessary governmental, regulatory or other approvals and consents required for the proposed merger, no delays, limitations, conditions or restrictions would be imposed that would have an adverse effect on Organovo or the contemplated benefits expected to be derived in the proposed Merger.

Roth is not a legal, tax, accounting or regulatory advisor. Roth is a financial advisor only and relied upon, without independent verification, the assessment of Organovo and Tarveda and their respective legal, tax, accounting and regulatory advisors with respect to legal, tax, accounting and regulatory matters. Roth expressed no opinion with respect to the fairness of the amount or nature of the compensation to any of Organovo's or Tarveda's officers, directors or employees, or any class of such persons, relative to the merger consideration to be received by the holders of Tarveda common stock in the Merger. Roth's opinion did not address the fairness of any consideration to be received by the holders of Tarveda warrants or Tarveda options pursuant to the Merger Agreement or to the holders of any other class of securities, creditors or other constituencies of Tarveda. Roth's opinion did not address the underlying business decision of Organovo to enter into the Merger or the relative merits of the Merger as compared to any other alternative business transaction, or other alternatives, or whether or not such alternatives could be achieved or are available. Roth did not make any independent valuation or appraisal of the assets or liabilities (fixed, contingent or otherwise) of Tarveda, nor was Roth furnished with any such valuations or appraisals, nor did Roth assume any obligation to conduct, nor did Roth conduct, any physical inspection of the properties, facilities or other assets of Tarveda. Roth did not evaluate the solvency of Tarveda under any law of any jurisdiction relating to bankruptcy, insolvency or similar matters. Roth is not a legal expert, and for purposes of its analysis, Roth did not make any assessment of the status of any outstanding litigation involving Tarveda and excluded the effects of any such litigation in its analysis. Roth's opinion was based on financial, economic, market and other conditions as in effect on, and the information made available to it as of, the date of its opinion. Events occurring after the date of Roth's opinion may affect the opinion and the assumptions used in preparing it, and Roth did not assume any obligation to update, revise or reaffirm its opinion.

Roth's opinion addressed only the fairness from a financial point of view, as of the date thereof, to Organovo of the merger consideration to be paid by Organovo to the holders of Tarveda common stock (other than shares held in the treasury of Tarveda, shares held by Organovo or Merger Sub and any dissenting shares) in the proposed Merger. The issuance of Roth's opinion was approved by a fairness opinion committee of Roth.

Summary of Material Financial Analysis

The following is a summary of the material financial analyses performed by Roth and reviewed by the Organovo special committee in connection with Roth's opinion relating to the Merger and does not purport to be a complete description of the financial analyses performed by Roth. The rendering of an opinion is a complex analytic process involving various determinations as to the most appropriate and relevant methods of financial analysis and the application of those methods to the particular circumstances. Therefore, this summary does not purport to be a complete description of the analyses performed by Roth or of its presentation to the Organovo special committee on December 12, 2019. The order of analyses described below does not represent the relative importance or weight given to those analyses by Roth. Some of the summaries of the financial analyses include information presented in tabular format. In order to fully understand Roth's financial analyses, the tables must be read together with the text of each summary, as the tables alone do not constitute a complete description of the financial analyses. Considering the data below without considering the full narrative description of the financial analyses, including the methodologies and assumptions underlying the analyses, could create a misleading or incomplete view of Roth's financial analyses.

In performing its analyses, Roth made numerous assumptions with respect to industry performance, general business and economic conditions and other matters, many of which are beyond the control of Organovo and Tarveda or any other parties to the Merger Agreement. Roth does not assume any responsibility if future results are materially different from those discussed. Any estimates contained in these analyses are not necessarily indicative of actual values or predictive of future results or values, which may be significantly more or less favorable than as set forth below.

Organovo Liquidation Analysis and Public Market Valuation. For purposes of determining the ownership split between Organovo and Tarveda, the Merger Agreement assumes a valuation of $50 million for Organovo. In order to assess the fairness of this imputed valuation, Roth reviewed the both the liquidation value of Organovo and the public market value based on trading in the Organovo Common Stock prior to the announcement of the Merger. Based on discussions with, and financial projections provided by, Organovo management, Roth adjusted Organovo's cash and cash equivalents reported as of September 30, 2019 for estimated cash utilization to the March 31, 2020, management's estimate of the closing date of the Merger, proceeds from divestitures completed in November 2019, estimated proceeds from potential sales of intellectual property and estimated future liabilities and wind down costs, as set forth in the table below:

Liquidation Analysis	Low	High
	($M)	
Cash as of September 30, 2019	$30.4	$30.4
Projected operating cash utilization	(7.0)	(5.8)
Proceeds from divestitures completed in November 2019	1.6	1.6
Estimated proceeds from potential sales of intellectual property	1.0	2.5
Estimated future liabilities and wind down costs	(2.0)	(0.5)
Estimated cash available for distribution to common stockholders	$24.0	$28.2

Roth noted that the estimated residual value range of $24.0 million to $28.2 million to holders of Organovo Common Stock in the liquidation scenario was below the imputed valuation used in the Merger Agreement.

Roth also reviewed trading in the Organovo Common Stock for the period from December 12, 2018 to December 11, 2019 and noted that the 30-day volume-weighted average price ("VWAP") of the Organovo

common stock as of December 11, 2019 was $0.43 and that the closing price was $0.50 as of that day. Based on Organovo's fully diluted shares outstanding using the treasury stock method, Roth calculated Organovo's stand-alone equity value range as approximately $56.1 million to $65.2 million and its enterprise value range of approximately $31.5 million to $40.7 million (assuming 130,497,563 fully diluted shares outstanding using the treasury stock method and excluding restricted stock units). As a result of Organovo's workforce reductions and recent divestitures of certain assets and operations, Roth did not perform an analysis of the enterprise value of Organovo using traditional valuation analyses such as the trading comparables for Organovo as a stand-alone entity.

Merger Consideration Analysis and Tarveda Valuation. For purposes of determining the consideration being issued in the Merger and based on the capitalization of Tarveda provided by the management of Tarveda as of the date of Roth's opinion, Roth assumed that Organovo will issue approximately 422.9 million shares of Organovo common stock in exchange for all of Tarveda's currently outstanding common stock (without taking into effect the Organovo Reverse Stock Split). Using the 30-day VWAP of $0.43 and the closing price of $0.50 as described above, Roth attributed a value of approximately $181.9 million to $211.5 million to the Organovo common stock being issued as Merger Consideration and compared this to three separate measures of Tarveda's implied enterprise value, including publicly traded comparable companies in Phase 1 or Phase 2 clinical trials in oncology, IPOs of comparable companies in Phase 1 or Phase 2 clinical trials in oncology and precedent acquisition transactions for comparable companies in Phase 1 or Phase 2 clinical trials in oncology.

Publicly Traded Comparable Company Analysis

Roth reviewed selected financial data of 16 selected publicly traded companies in the biopharmaceutical industry with a lead product candidate in Phase 1 or Phase 2 clinical trials for the treatment of solid tumor indications within oncology and with market capitalizations in the range of $50.0 million to $1.0 billion. Companies with negative enterprise values resulting from a major set back in their technology or product pipeline were excluded due to lack of comparability. Although the companies referred to below were used for comparison purposes, none of these companies is directly comparable to Tarveda. Accordingly, an analysis of the results of such a comparison is not purely mathematical but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the selected companies below. The companies included in the analysis were:

Company	Enterprise Value ($M)
Ziopharm Oncology Inc.	$ 794.4
G1 Therapeutics Inc.	613.1
Agenus Inc.	491.9
Replimmune Group Inc.	429.5
RAPT Therapeutics Inc.	425.8
Harpoon Therapeutics Inc.	372.8
Merus N.V.	327.1
Gritstone Oncology Inc.	298.9
TCR2 Therapeutics Inc.	270.7
Exicure Inc.	180.7
Jounce Therapeutics Inc.	149.6
Calithera Biosciences Inc.	118.1
Vaccinex Inc.	93.7
Evelo Biosciences Inc.	63.7
Genocea Biosciences Inc.	33.3
Checkpoint Therapeutics Inc.	30.8

Publicly Traded Comparable Company Analysis	Enterprise Value ($M)
Minimum	$ 30.8
25th Percentile	$ 112.0
Median	$ 284.8
75th Percentile	$ 426.7
Maximum	$ 794.4

The 16 companies in the comparable company analysis had implied total enterprise values between $30.8 million and $794.4 million. Roth derived a median implied total enterprise value of $284.8 million from the analysis. Using the 25th percentile and the 75th percentile of the implied total enterprise values, Roth calculated a range of implied total equity values for Tarveda (by adding an estimated $15.0 million in cash at closing and subtracting an estimated $10.0 million in debt at closing), which was $117.0 million to $431.7 million. Roth noted that, based upon the number of shares of Organovo common stock to be issued pursuant to the Merger Agreement and the 30-day VWAP and closing price of Organovo common stock as described previously, the implied equity value of Tarveda in the Merger was approximately $181.9 million to $211.5 million.

Precedent Initial Public Offering Analysis

Roth reviewed the IPOs of 14 selected biopharmaceutical companies which completed an IPO since January 2017 and whose lead product candidate at the time of the IPO was in Phase 1 or Phase 2 clinical trials for the treatment of solid tumor indications within oncology. Although the companies referred to below were used for comparison purposes, none of these companies is directly comparable to Tarveda. Accordingly, an analysis of the results of such a comparison is not purely mathematical but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the selected companies below. The companies included in the analysis were:

IPO Date	Company	Enterprise Value at IPO ($M)
9/20/2018	Y-mAbs Therapeutics Inc.	$ 409.9
9/27/2017	Diciphera Pharmaceuticals Inc.	391.8
7/20/2018	Replimune Group Inc.	348.2
4/16/2019	Turning Point Therapeutics Inc.	341.6
5/16/2017	G1 Therapeutics Inc.	332.4
9/27/2018	Gritstone Oncology Inc.	302.9
2/7/2019	Harpoon Therapeutics Inc.	213.4
2/13/2019	TCR2 Therapeutics Inc.	200.2
1/26/2017	Jounce Therapeutics Inc.	187.4
10/30/2019	RAPT Therapeutics Inc.	172.3
5/22/2019	Bicycle Therapeutics plc	149.9
5/8/2019	Nextcure Inc.	149.6
4/12/2017	Tocagen Inc.	87.8
5/3/2017	Urogen Pharma Ltd.	85.7

Publicly Traded Comparable Company Analysis	Enterprise Value at IPO ($M)
Minimum	$ 85.7
25th Percentile	$ 155.5
Median	$ 206.8
75th Percentile	$ 339.3
Maximum	$ 409.9

The 14 companies in the precedent IPO analysis had implied total enterprise values between $85.7 million and $409.9 million. Roth derived a median implied total enterprise value of $206.8 million from the analysis. Using the 25th percentile and the 75th percentile of the implied total enterprise values, Roth calculated a range of implied total equity values for Tarveda (by adding an estimated $15.0 million in cash at closing and subtracting an estimated $10.0 million in debt at closing), which was $160.5 million to $344.3 million. Roth noted that, based upon the number of shares of Organovo Common Stock to be issued pursuant to the Merger Agreement and the 30-day VWAP and closing price of Organovo Common Stock as described previously, the implied equity value of Tarveda in the merger was approximately $181.9 million to $211.5 million.

Precedent M&A Transactions

Roth also reviewed and compared the financial terms, to the extent publicly available, of selected acquisition transactions that were announced between September 2017 and December 2019 and involved the acquisition of companies whose lead product candidate was in Phase 1 or Phase 2 clinical trials for the treatment of an indication in oncology at the time of their respective transaction. Although the precedent transactions referred to below were used for comparison purposes, none of them involved companies directly comparable to Tarveda. Accordingly, an analysis of the results of such a comparison is not purely mathematical but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the selected companies involved and other factors that could affect the transaction value of such companies and Tarveda to which they are being compared. For each of the selected transactions, based on publicly available information at the time of the relevant transaction, Roth calculated and compared the resulting transaction values as an aggregate of upfront consideration and a probability-weighted amount of milestone consideration. The milestone consideration payable to targets with a lead product candidate in a Phase 1 clinical trial and in a Phase 2 clinical trial were probability weighted at 5.1% and 8.1%, respectively. These probability adjustment factors represent the probability that oncology assets at these stages of development would achieve FDA approval, as reported by the Biotechnology Innovation Organization ("BIO") in its "Clinical Development Success Rates 2006-2015" report. The selected transactions analyzed are set out below:

Announcement Date	Acquirer	Target	Upfront Consideration ($M)	Milestone Consideration ($M)	Probability Adjusted Milestone Consideration ($M)	Probability Adjusted Total Deal Value ($M)	Probability Adjusted Enterprise Value ($M)
12/9/2019	Sanofi	Synthorx Inc.	$ 2,500.0	$ 0.0	$ 0.0	$ 2,500.0	$ 2,350.0
5/21/2019	Merck & Co. Inc.	Peloton Therapeutics Inc.	1,050.0	1,150.0	93.2	1,143.2	973.9
2/21/2019	Merck & Co. Inc.	Immune Design Corp.	300.0	0.0	0.0	300.0	204.2
12/13/2018	Astellas Pharma Inc.	Potenza Therapeutics Inc.	164.6	240.1	12.2	176.8	176.8*
7/10/2018	Tasly Biopharmaceuticals	Transgene SA	48.0	0.0	0.0	48.0	48.0*
5/14/2018	Eli Lilly & Co.	AurKa Pharma, Inc.	110.0	465.0	23.7	133.7	133.7*
2/21/2018	Merck & Co. Inc.	Viralytics Pty, Ltd.	394.0	0.0	0.0	394.0	372.0
1/31/2018	Seattle Genetics Inc.	Cascadian Therapeutics Inc.	614.0	0.0	0.0	614.0	520.7
12/21/2017	Roche	Ignyta Inc.	1,700.0	0.0	0.0	1,700.0	1,587.2
9/6/2017	Merck & Co. Inc.	Rigontec GmbH	136.9	415.4	21.2	158.1	158.1*

Precedent M&A Transactions	Probability Adjusted Enterprise Value ($M)
Minimum	$ 48.0
25th Percentile	$ 162.8
Median	$ 288.1
75th Percentile	$ 860.6
Maximum	$ 2,350.0

* Cash and debt balances of these targets were not publicly available, so probability adjusted total deal values are used to estimate enterprise values in these cases.

Roth further estimated the probability adjusted enterprise values of the targets by subtracting cash, and adding debt, if any, on the respective target's balance sheet (to the extent the data was publicly available) to the respective probability adjusted total deal values. The probability adjusted enterprise values ranged from $48.0 million to $2.4 billion. Roth then derived a median probability adjusted enterprise value of $288.1 million from the analysis. Using the 25th percentile and the 75th percentile of the probability adjusted enterprise values, Roth calculated a range of implied total equity values for Tarveda (by adding an estimated $15.0 million in cash at closing and subtracting an estimated $10.0 million in debt at closing), which was $167.8 million to $865.6 million. Roth noted that, based upon the number of shares of Organovo common stock to be issued pursuant to the Merger Agreement and the 30-day VWAP and closing price of Organovo common stock as described previously, the implied equity value of Tarveda in the Merger was approximately $181.9 million to $211.5 million.

General

The summary set forth above does not contain a complete description of the analyses performed by Roth, but does summarize the material analyses performed by Roth in rendering its opinion. The preparation of a fairness opinion is a complex process and is not necessarily susceptible to partial analysis or summary description. Roth believes that its analyses and the summary set forth above must be considered as a whole and that selecting portions of its analyses or of the summary, without considering the analyses as a whole or all of the factors included in its analyses, would create an incomplete view of the processes underlying the analyses set forth in the Roth opinion. In arriving at its opinion, Roth considered the results of all of its analyses and did not attribute any particular weight to any factor or analysis. Instead, Roth made its determination as to fairness on the basis of its experience and financial judgment after considering the results of all of its analyses. The fact that any specific analysis has been referred to in the summary above is not meant to indicate that this analysis was given greater weight than any other analysis. In addition, the ranges of valuations resulting from any particular analysis described above should not be taken to be Roth's view of the actual value of Organovo, Tarveda or the merger consideration.

As described above, Roth's opinion was only one of many factors considered by the Organovo special committee and the Organovo board of directors in making its determination to approve the Merger. Roth was requested to, and solicited expressions of interest from other parties with respect to a business combination with Organovo, although the Merger with Tarveda was the only transaction considered in rendering Roth's opinion.

Roth is a full service securities firm engaged in securities trading and brokerage activities, as well as providing investment banking and other financial services. The Organovo special committee selected Roth to act as its financial advisor in connection with the transactions contemplated by the Merger Agreement because Roth is a nationally recognized investment banking firm and because, Roth as part of its investment banking business, is consistently engaged in the valuation of companies and their securities in connection with merger and acquisition transactions, public and private offerings and placements of securities and other securities related activities. Roth has had no relationship with Organovo, Merger Sub or Tarveda in the past two years for which it has received or may receive any compensation, except as described below and that in the ordinary course of business Roth and its affiliates may acquire, hold or sell, for it and its affiliates' own accounts and for the accounts of customers, equity, debt and other securities and financial instruments (including bank loans and other obligations) of Organovo and the other parties to the Merger, and, accordingly, may at any time hold a long or a short position in such securities. Roth and its affiliates may in the future provide investment banking and other financial services to Organovo, Merger Sub and Tarveda and their respective affiliates for which Roth would expect to receive compensation.

Roth is acting as financial advisor to the Organovo special committee in connection with the Merger. Pursuant to its engagement letter with Roth, Organovo paid a $75,000 retainer to Roth at the time of its engagement and has agreed to pay Roth (a) a $250,000 fee upon the delivery of a fairness opinion, which fee is not contingent upon the closing of the Merger, and (c) a $750,000 advisory fee, against which the

aforementioned retainer shall be credited, upon the closing of the Merger or any similar transaction involving alternate bidders either introduced by Roth or with which Organovo had discussions during the term of Roth's engagement other than certain terminations of Roth's engagement for cause. These fees were determined by Roth and proposed to the Organovo special committee. In addition, Organovo has agreed to indemnify Roth for certain liabilities that may arise out of its engagement by the Organovo special committee and the rendering of Roth's opinion and to reimburse certain of Roth's reasonable, actual out-of-pocket expenses, including fees and disbursements of Roth's legal counsel not to exceed $50,000.

Historical Background for Amendment to Merger Agreement

On January 18, 2020, representatives of Organovo's management team, Tarveda's management team, Gunderson Dettmer and Cooley held a conference call. During the conference call, the Organovo management team discussed that in order to increase the amount of Organovo's net cash at the closing of the Merger (which is considered in calculating the Exchange Ratio under the terms of the Merger Agreement), Organovo had pursued opportunities to monetize its intellectual property as well as its tissue candidates and models, its licenses and collaborations, and its remaining assets. The Organovo management team reviewed its ongoing efforts to monetize Organovo's intellectual property and remaining assets. Representatives of Tarveda expressed concerns about potential delays in finalizing this proxy statement/prospectus/information statement, as well as delays to the date of the Organovo special meeting and the closing of the Merger, if Organovo continued to pursue these efforts.

On January 19, 2020 and January 20, 2020, representatives of Organovo, Tarveda, Gunderson Dettmer and Cooley held further conference calls regarding Organovo's monetization efforts and concerns about potential delays and risks created by these efforts.

On January 21, 2020, representatives of Organovo, Tarveda, Gunderson Dettmer and Cooley discussed amending the Merger Agreement to provide the Organovo stockholders with value for Organovo's intellectual property and remaining assets.

On January 22, 2020, representatives of Tarveda sent a draft of the Amendment to Merger Agreement to Organovo. The Amendment to Merger Agreement provided for a $1.5 million increase to Organovo's valuation under the terms of the Merger Agreement if Organovo does not sell its intellectual property and other remaining assets before the closing of the Merger. Organovo's valuation is used to calculate the Exchange Ratio between the Organovo and Tarveda stockholders. The Amendment to Merger Agreement also contained certain other revisions to clarify the stockholder proposals to be voted on at the Organovo Special Meeting.

On January 22, 2020, representatives of Organovo and Gunderson Dettmer discussed the draft Amendment to Merger Agreement, and discussed certain proposed comments and revisions. On January 22, 2020, representatives of Gunderson Dettmer sent representatives of Tarveda and representatives of Cooley comments to the draft Amendment to Merger Agreement. On January 23, 2020, representatives of Cooley and Gunderson Dettmer discussed that Tarveda and Organovo, respectively, were signed off on the Amendment to Merger Agreement, subject to approvals by the Tarveda board of directors and Organovo board of directors.

On January 23, 2020, the Organovo board of directors held a meeting to discuss the Amendment to Merger Agreement. At the meeting, Organovo's management team discussed the proposed terms of the Amendment to Merger, the potential impact on Organovo's valuation and the potential impact on the ownership of the combined organization by Organovo's existing stockholders. Organovo's management team then summarized its ongoing efforts to monetize Organovo's intellectual property and remaining assets. The Organovo board of directors then discussed the value Organovo's existing stockholders would receive pursuant to the terms of the Amendment to Merger Agreement. The Organovo board of directors also discussed the associated transaction risks of continuing to pursue Organovo's monetization efforts, including the potential risks of delays to the timing of the Organovo

special meeting and the closing of the Merger. After this discussion, the Organovo board of directors determined that entering into the Amendment to Merger Agreement was in the best interests of Organovo and its stockholders and that the terms are entirely fair to the Organovo stockholders.

On January 26, 2020, Organovo and Tarveda executed the Amendment to Merger Agreement.

Interests of the Organovo Directors and Executive Officers in the Merger

In considering the recommendation of the Organovo board of directors with respect to the approval of the Merger Agreement, the Merger and the issuance of shares of Organovo common stock as contemplated by the Merger Agreement and the other matters to be acted upon by the Organovo stockholders at the Organovo special meeting, the Organovo stockholders should be aware that certain members of the Organovo board of directors and current and former executive officers of Organovo have interests in the Merger that may be different from, or in addition to, the interests of the Organovo stockholders. These interests relate to or arise from the matters described below. The board of directors of each of Organovo and Tarveda was aware of these potential conflicts of interest and considered them, among other matters, in reaching their respective decisions to approve the Merger Agreement and the Merger, and to recommend, as applicable, that the Organovo stockholders approve the Organovo stockholder proposals as contemplated by this proxy statement/prospectus/information statement.

Severance and Equity Award Acceleration

Severance Payments Pertaining to Named Executive Officers

Organovo has entered into a Severance and Change in Control Plan Participation Agreement with each of its executive officers pursuant to the Organovo Severance Plan that may result in the receipt by such executive officers of cash severance payments and other benefits with a total value of approximately $3.06 million (collectively, not individually, and excluding the value of any accelerated vesting of Organovo equity awards) and the accelerated vesting of Organovo equity awards held by those officers.

Upon termination of employment by Organovo for reasons other than cause, death or disability or by the participant for good reason within 6 months before or within 12 months after a change in control (as defined in the Organovo Severance Plan), each of Organovo's named executive officers is eligible for the following severance benefits under the Organovo Severance Plan: Messrs. Crouch and Kussman are eligible for a cash severance payment equal to two times such executive officer's base salary, paid in a lump sum, plus a target bonus for the fiscal year in which the termination occurs, health benefit continuation for up to 18 months, and outplacement assistance for 18 months; and Ms. Bush is eligible for a cash severance payment equal to one times her base salary, paid in a lump sum, plus a target bonus for the fiscal year in which the termination occurs, health benefit continuation for up to 12 months, and outplacement assistance for 12 months.

Payment of benefits under the Organovo Severance Plan is conditioned upon the executive officer signing a general release of claims in favor of Organovo and agreeing to abide by restrictive covenants including maintaining confidential information of Organovo, non-solicitation and non-recruitment of Organovo employees for up to a twenty-four month period, non-solicitation of Organovo's customers or potential customers during such restricted period, non-employment by and limitations on investment in competitors of Organovo for such restricted period, and no disparagement of Organovo.

Equity Acceleration

In addition, each executive officer of Organovo will receive full accelerated vesting of all outstanding equity awards and a one-year time period to exercise any stock options or stock appreciation rights. As of December 31, 2019, Organovo's named executive officers held the following equity awards, all of which are anticipated will

accelerate pursuant to the Organovo Severance Plan upon the Merger and subsequent termination of the named executive officers without cause: Mr. Crouch, 2,086,204 unvested options and 2,273,109 RSUs; Mr. Kussman, 713,437 unvested options and 960,287 RSUs; Ms. Bush, 653,645 unvested options and 851,805 RSUs.

Board Matters

Pursuant to the terms of the Merger Agreement, Carolyn Beaver and Mark Kessel, who are currently directors of Organovo, will continue as directors of the combined organization after the Closing and will continue to receive compensation as non-employee directors.

Equity Interests of Executive Officers

The following table presents certain information concerning the outstanding option awards and RSUs held by each of the named executive officers, as of December 31, 2019. Please see the "*Merger Related Executive Compensation Arrangements*" disclosure included below for quantification of the value associated with the vesting acceleration of these awards in connection with the termination of the Organovo named executive officers upon the consummation of the Merger.

	Option Awards				RSU Awards	
	No. of Securities Underlying Unexercised Options (#) Exercisable	No. of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	No. of Shares or Units of Stock That Have Not Vested (#)	Equity Incentive Plan Awards: No. of Unearned Shares, Units or Other Rights That Have Not Vested (#)
Taylor Crouch	1,305,133(1)	783,079	$ 2.73	4/24/2027	—	158,706(2)
	225,000(3)	375,000	$ 1.84	5/24/2028	92,975(4)	—
	421,875(5)	928,125	$ 1.135	8/15/2028	2,021,428(6)	—
Craig Kussman	268,125(7)	61,875	$ 4.01	8/23/2026	24,750(8)	—
	112,500(3)	187,500	$ 1.84	5/24/2028	82,500(9)	—
	210,938(5)	464,062	$ 1.135	8/15/2028	46,487(4)	—
					806,550(6)	
Jennifer Kinsbruner Bush, JD	150,000(10)	—	$ 6.84	11/6/2024	6,250(11)	—
	125,000(12)	—	$ 4.92	6/4/2025	8,750(13)	—
	87,500(1)	12,500	$ 3.99	7/11/2026	71,250(9)	—
	106,250(3)	177,083	$ 1.84	5/24/2028	43,905(4)	—
	210,938(5)	464,062	$ 1.135	8/15/2028	721,650(6)	—

(1) 25% of the stock options vested and became exercisable on July 11, 2017 in the case of Ms. Bush and April 24, 2018 in the case of Mr. Crouch, with the remaining option shares vesting in equal quarterly amounts over the following three years.
(2) The RSUs are eligible to vest in three separate but equal tranches based on the achievement of certain regulatory milestones.
(3) The stock options began vesting and become exercisable equally over sixteen quarters for a total of 48 months beginning on May 15, 2018.
(4) The RSUs vest in 16 equal quarterly installments beginning on May 15, 2018.
(5) 25% of the stock options vested and became exercisable on August 15, 2019, with the remaining option shares vesting in equal quarterly amounts over the following three years.
(6) The PBRSU Retention Awards are eligible to vest in full upon the earlier of the Company's engagement in a pre-IND meeting with the FDA, twenty-four months from the grant date or a change in control.

(7) 25% of the stock options vested and became exercisable on August 23, 2017, with the remaining option shares vesting in equal quarterly amounts over the next three years.
(8) 25% of the RSUs vested on August 23, 2017, with the remaining RSUs vesting in equal quarterly amounts over the next three years.
(9) The RSUs vest in 16 equal quarterly installments beginning on May 15, 2017.
(10) 25% of the stock options vested and became exercisable on September 2, 2015, with the remaining option shares vesting in equal quarterly amounts over the following three years.
(11) The RSUs vest in 16 equal quarterly installments beginning on May 15, 2016.
(12) 25% of the stock options vested and became exercisable on June 4, 2016, with the remaining option shares vesting in equal quarterly amounts over the following three years.
(13) 25% of the RSUs vested on November 15, 2017, with the remaining RSUs vesting in equal quarterly amounts over the next three years.

Merger Related Executive Compensation Arrangements

The following table and related footnotes present information about the compensation payable to Organovo's named executive officers (who are the only executive officers of Organovo) in connection with the Merger and their associated termination without cause from Organovo. The compensation shown in the table below is intended to comply with Item 402(t) of Regulation S-K, which requires disclosure of information about compensation for each named executive officer that is based on or otherwise relates to the Merger.

The values in the table below assume a termination as of March 31, 2020.

The named executive officers are not entitled to any pension or non-qualified deferred compensation benefits or enhancements or any tax reimbursements in connection with the Merger. The other payments relate solely to the bonuses payable to the named executive officers in connection with the consummation of the Merger pursuant to Organovo's short-term incentive plan.

Name	Cash ($) (1)	Equity ($) (2)	Perquisites/ Benefits ($)	Other ($) (3)	Total ($)
Taylor Crouch Chairman, Chief Executive Officer, President	1,030,000	1,177,182	78,639(4)	257,500	2,543,321
Craig Kussman Chief Financial Officer	793,350	485,492	106,065(5)	158,670	1,543,577
Jennifer Kinsbruner Bush, JD SVP, General Counsel, Corporate Secretary and Compliance Officer	357,410	431,719	32,891(6)	242,964	1,064,984

(1) These amounts represent a cash severance payment pursuant to the Organovo Severance Plan equal to two times the named executive officer's annual base salary in the case of Messrs. Crouch and Kussman, and one times the named executive officer's annual base salary for Ms. Bush. The cash severance is payable in a lump sum.
(2) These amounts represent the value of acceleration of all RSUs held by the named executive officers and represent the product of (i) $0.52 (the average closing market price on The Nasdaq Stock Market of Organovo's common stock over the first five business days following the first public announcement of the transaction) multiplied by (ii) the number of outstanding RSUs for which vesting would be accelerated. No value is included in the table above for the acceleration of stock option awards because the exercise price for each option held by our named executive officers is out of the money. The closing market price on The Nasdaq Capital Market of Organovo's common stock was $0.35 on February 21, 2020.
(3) These amounts represent the maximum bonus payable pursuant to the Organovo Severance Plan.
(4) Includes (i) $64,139, which represents the estimated value of the health continuation coverage for 18 months pursuant to the Organovo Severance Plan and (ii) $14,500, which represents the estimated value of 18 months of outplacement services pursuant to the Organovo Severance Plan.

(5) Includes (i) $91,565, which represents the estimated value of the health continuation coverage for 18 months pursuant to the Organovo Severance Plan and (ii) $14,500, which represents the estimated value of 18 months of outplacement services pursuant to the Organovo Severance Plan.

(6) Includes (i) $18,391, which represents the estimated value of the health continuation coverage for 12 months pursuant to the Organovo Severance Plan and (ii) $14,500, which represents the estimated value of 12 months of outplacement services pursuant to the Organovo Severance Plan.

Ownership Interests

As of December 31, 2019, the directors and executive officers of Organovo owned, in the aggregate, less than 1% of the outstanding voting shares of Organovo common stock. Each of Organovo's officers and directors have entered into support agreements and lock-up agreements in connection with the Merger. The support agreements and lock-up agreements are discussed in greater detail in the section titled "*Agreements Related to the Merger*" in this proxy statement/prospectus/information statement.

Interests of the Tarveda Directors and Executive Officers in the Merger

In considering the recommendation of the board of directors of Tarveda with respect to adopting the Merger Agreement, Tarveda stockholders should be aware that certain members of the board of directors and executive officers of Tarveda have interests in the Merger that may be different from, or in addition to, interests they may have as Tarveda stockholders. Each of the board of directors Organovo and the board of directors of Tarveda was aware of these potential conflicts of interest and considered them, among other matters, in reaching their respective decisions to approve the Merger Agreement and the Merger, and to recommend, as applicable, that the Organovo stockholders approve the Organovo proposals to be presented to the Organovo stockholders for consideration at the Organovo special meeting as contemplated by this proxy statement/prospectus/information statement, and that the Tarveda stockholders sign and return the written consent as contemplated by this proxy statement/prospectus/information statement.

Capital Stock Interests

Tarveda's Chief Executive Officer and affiliates of certain of Tarveda's directors currently hold shares of Tarveda's preferred stock. The shares of preferred stock will be converted into shares of Tarveda common stock prior to the consummation of the Merger. The table below sets forth the ownership of Tarveda's preferred stock as of December 31, 2019 by Mr. Fromkin and the affiliates of certain of Tarveda's directors and such stockholders' anticipated ownership of Tarveda common stock immediately prior to the consummation of the Merger following the conversion of their preferred stock.

Stockholder Name	Number of Shares of Tarveda Preferred Stock as of December 31, 2019	Number of Shares of Tarveda Common Stock Immediately Prior to the Consummation of the Merger	Number of Shares of Organovo Common Stock Immediately Following the Consummation of the Merger (1)
Executive Officers			
Andrew J. Fromkin	784,838	39,241,900	5,144,613
Affiliates of Directors of Tarveda			
Novo Holdings A/S	26,112,842	1,305,642,100	171,169,680
Entities affiliated with Versant Ventures	20,347,719	1,017,385,950	133,379,298
Entities affiliated with NanoDimension	15,675,668	783,783,400	102,754,004

(1) The shares reported assume that, at the Effective Time, each share of Tarveda common stock will convert into the right to receive 0.1311 shares of Organovo common stock, subject to adjustment to account for the

effect of the proposed Organovo Reverse Stock Split to be implemented prior to the consummation of the Merger and to account for the occurrence of certain events discussed elsewhere in this proxy statement/prospectus/information statement and elimination of fractions. The estimated Exchange Ratio calculation used herein is based upon Organovo's capitalization immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted to account for the issuance of any additional shares of Organovo common stock prior to the consummation of the Merger. See "*The Merger Agreement—Merger Consideration*" for more information regarding the Exchange Ratio. No fractional shares of Organovo common stock will be issuable pursuant to the Merger to Tarveda stockholders. Instead, each Tarveda stockholder who would otherwise be entitled to receive a fraction of a share of Organovo common stock, after aggregating all fractional shares of Organovo common stock issuable to such stockholder, will be entitled to receive in cash the dollar amount, rounded to the nearest whole cent, without interest, determined by multiplying such fraction by the closing price of a share of Organovo common stock as quoted on The Nasdaq Capital Market, on the date the Merger becomes effective.

Stock Options

Certain of Tarveda's directors and executive officers currently hold options, subject to vesting, to purchase shares of Tarveda common stock. At the Effective Time, each option to purchase Tarveda common stock that is outstanding and unexercised immediately prior to the Effective Time under the 2011 Tarveda Plan, whether or not vested, will be converted into an option to purchase Organovo common stock. Organovo will assume the 2011 Tarveda Plan. All rights with respect to Tarveda common stock under Tarveda options assumed by Organovo will be converted into rights with respect to Organovo common stock. Accordingly, from and after the Effective Time, each Tarveda stock option assumed by Organovo may be exercised for such number of shares of Organovo common stock as is determined by multiplying the number of shares of Tarveda common stock subject to the option by the Exchange Ratio and rounding that result down to the nearest whole number of shares of Organovo common stock. The per share exercise price of the converted option will be determined by dividing the existing exercise price of the option by the Exchange Ratio and rounding that result up to the nearest whole cent. Any restrictions on the exercise of any Tarveda option assumed by Organovo will continue following the conversion and the term, exercisability, vesting schedules and other provisions of assumed Tarveda options will generally remain unchanged. The table below sets forth certain information with respect to such options, without giving effect to the conversion and assumption of the Tarveda options at the Effective Time. Upon conversion and assumption, the outstanding options will be subject to adjustment to account for the effect of the proposed Organovo Reverse Stock Split to be implemented prior to the consummation of the Merger and to account for the occurrence of certain events discussed elsewhere in this proxy statement/prospectus/information statement.

Optionholder Name	Grant Date	Expiration Date	Exercise Price ($)	Number of Shares of Common Stock Underlying Options as of December 31, 2019	Number of Vested Shares of Common Stock Underlying Options as of December 31, 2019
Executive Officers					
Andrew J. Fromkin	April 11, 2016	April 9, 2026	$ 0.18	2,711,495	2,496,940
	March 28, 2017	March 26, 2027	$ 0.31	1,325,474	856,035
	February 13, 2019	February 10, 2029	$ 0.37	739,900	107,902
Jeffrey D. Bloss, M.D.	September 26, 2018	September 23, 2028	$ 0.39	1,158,815	313,845
	February 13, 2019	February 10, 2029	$ 0.37	209,500	30,552
Brian K. Roberts	February 28, 2018	February 26, 2028	$ 0.34	998,364	415,982
	February 13, 2019	February 10, 2029	$ 0.37	235,000	34,271
Mark T. Bilodeau, Ph.D.	May 4, 2012	May 2, 2022	$ 0.10	4,858	4,858
	July 17, 2012	July 15, 2022	$ 0.10	3,692	3,692
	January 31, 2013	January 29, 2023	$ 1.03	12,945	12,945

Optionholder Name	Grant Date	Expiration Date	Exercise Price ($)	Number of Shares of Common Stock Underlying Options as of December 31, 2019	Number of Vested Shares of Common Stock Underlying Options as of December 31, 2019
	February 12, 2014	February 10, 2024	$ 1.13	3,439	3,439
	September 4, 2014	September 1, 2024	$ 1.13	2,429	2,429
	February 18, 2015	February 15, 2025	$ 1.96	4,104	4,104
	April 6, 2016	April 4, 2026	$ 0.18	584,533	535,821
	March 28, 2017	March 26, 2027	$ 0.31	380,839	245,956
	February 13, 2019	February 10, 2029	$ 0.37	180,300	26,294
Sudhakar Kadiyala, Ph.D.	April 16, 2014	April 13, 2024	$ 1.13	1,457	1,457
	September 2, 2015	August 30, 2025	$ 1.96	17,492	17,492
	April 6, 2016	April 4, 2026	$ 0.18	448,551	411,171
	March 28, 2017	March 26, 2027	$ 0.31	529,339	341,861
	February 13, 2019	February 10, 2029	$ 0.37	180,300	26,294
Non-Executive Directors					
Dennis Ausiello	December 31, 2011	December 28, 2021	$ 0.10	3,420	3,420
	November 6, 2014	November 3, 2024	$ 1.96	9,717	9,717
	April 6, 2016	April 4, 2026	$ 0.18	100,000	85,416
	June 13, 2017	June 11, 2027	$ 0.31	16,863	9,485
	February 13, 2019	February 10, 2029	$ 0.37	27,000	3,937
Nilesh Kumar, Ph.D.	N/A	N/A	N/A	—	—
Guido Magni, M.D., Ph.D.	N/A	N/A	N/A	—	—
Michael A. Metzger	March 28, 2017	March 26, 2027	$ 0.31	50,000	36,457
	June 13, 2017	June 11, 2027	$ 0.31	80,000	44,999
	February 13, 2019	February 10, 2029	$ 0.37	170,000	24,792
Aymeric Sallin, M.S.	N/A	N/A	N/A	—	—

Management Following the Merger

As described elsewhere in this proxy statement/prospectus/information statement, including in "*Management Following the Merger*," certain of the current directors and executive officers of Tarveda are expected to become the directors and executive officers of Organovo upon the consummation of the Merger.

Indemnification and Insurance

Under the Merger Agreement, from the consummation of the Merger through the sixth anniversary of the closing, each of Organovo and Tarveda, as the surviving corporation in the Merger, shall, jointly and severally, indemnify and hold harmless each person who is or has served as a director or officer of Tarveda against all claims, losses, liabilities, damages, judgments, fines and reasonable fees, costs and expenses, including attorneys' fees and disbursements, incurred in connection with any claim, action, suit, proceeding or investigation, whether civil, criminal, administrative or investigative, arising out of or pertaining to the fact that such person is or was a director or officer of Tarveda, to the fullest extent permitted under the DGCL for directors or officers of Delaware corporations. In addition, each such director and officer, or former director and officer, is entitled to advancement of expenses incurred in the defense of any such claim, action, suit, proceeding or investigation.

Under the Merger Agreement, the certificate of incorporation and bylaws of each of Organovo and Tarveda, as the surviving corporation in the Merger, shall contain provisions no less favorable with respect to indemnification, advancement of expenses and exculpation of present and former directors and officers of each

of Organovo and Tarveda than are presently set forth in the certificate of incorporation and bylaws of Organovo and Tarveda, as applicable, which provisions shall not be amended, modified or repealed for a period of six years' time from the consummation of the Merger in a manner that would adversely affect the rights thereunder of individuals who, at or prior to the closing, were officers or directors of Organovo and Tarveda.

Limitations of Liability and Indemnification

In addition to the indemnification required in the amended and restated certificate of incorporation and bylaws, as amended, of Tarveda, Tarveda has entered into indemnification agreements with each of its directors and officers. These agreements provide for the indemnification of the directors and officers of Tarveda for all reasonable expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were agents of Tarveda.

Stock Options and Warrants

As of December 31, 2019, an aggregate of 14,559,439 of shares of Tarveda common stock were issuable upon the exercise of outstanding stock options under the 2011 Tarveda Plan with a weighted average exercise price of $0.28 per share. Such options will be converted into and become options to purchase shares of Organovo common stock pursuant to the Merger Agreement. Organovo will file a registration statement on Form S-8, if available for use by Organovo, relating to the shares of Organovo common stock issuable with respect to Tarveda options converted and assumed by Organovo pursuant to the terms of the Merger Agreement.

As of December 31, 2019, an aggregate of 502,830 shares of Tarveda preferred and common stock were issuable upon the exercise of outstanding warrants at a weighted exercise price of $2.44 per share. Such warrants will be converted into warrants to purchase shares of Organovo common stock pursuant to the Merger Agreement.

Form of the Merger

The Merger Agreement provides that at the Effective Time, Merger Sub will be merged with and into Tarveda. Upon the consummation of the Merger, Tarveda will continue as the surviving corporation and will be a wholly-owned subsidiary of Organovo. The Merger is intended to constitute a "reorganization" within the meaning of Section 368(a) of the Code for U.S. federal income tax purposes. For more information see the section titled "*The Merger – Certain Material U.S. Federal Income Tax Consequences of the Merger*" in this proxy statement/prospectus/information statement.

After completion of the Merger, Organovo will be renamed "Tarveda Therapeutics, Inc." and expects to trade on The Nasdaq Capital Market under the symbol "TVDA."

Merger Consideration and Adjustment

Immediately following, each share of Tarveda preferred stock outstanding at such time will be converted into shares of Tarveda common stock at a ratio determined in accordance with the Tarveda certificate of incorporation then in effect. At the Effective Time:

- each share of Tarveda common stock outstanding immediately prior to the Effective Time will automatically be converted into the right to receive an estimated 0.1311 shares of Organovo common stock, subject to adjustment to account for the proposed Organovo Reverse Stock Split. The estimated Exchange Ratio calculation contained herein is based upon Organovo's capitalization immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted to account for the amount by which Organovo's net cash at the closing of the Merger increases or decreases, Organovo's and Tarveda's debt at the closing of the Merger and adjustments in the capitalization of Organovo and Tarveda prior to the Merger;

- each option to purchase shares of Tarveda common stock outstanding and unexercised immediately prior to the Effective Time will be assumed by Organovo and will become an option, subject to vesting, to purchase shares of Organovo common stock; and
- each warrant to purchase shares of Tarveda capital stock outstanding and not terminated or exercised immediately prior to the Effective Time will be assumed by Organovo and will become a warrant to purchase shares of Organovo common stock.

Immediately after consummation of the Merger, based on the Exchange Ratio, it is expected that Tarveda stockholders, warrantholders and optionholders will own approximately 75% of the Organovo common stock on a fully diluted bases as defined in the Merger Agreement with Organovo stockholders, optionholders and warrantholders holding approximately 25% of the Organovo common stock on a fully diluted bases as defined in the Merger Agreement.

The Exchange Ratio provided herein is an estimate based upon Organovo's capitalization numbers immediately prior to the date of this proxy statement/prospectus/information statement. The final Exchange Ratio will be adjusted to account for the issuance of additional shares of Organovo common stock prior to the consummation of the Merger. The final Exchange Ratio calculation is the quotient determined by dividing the Surviving Corporation Allocation Shares (as defined below) by the total number of shares of Tarveda common stock outstanding immediately prior to Closing as expressed on a fully-diluted and as-converted to common stock basis.

The "Surviving Corporation Allocation Shares" is the number determined by first *dividing* the total number of shares of Organovo common stock outstanding immediately prior to the consummation of the Merger as expressed on a fully-diluted and as-converted to common stock basis (the "Organovo Outstanding Shares") by the Organovo Allocation Percentage and then *subtracting* the Organovo Outstanding Shares. The Organovo Allocation Percentage is derived by dividing $50.0 million (less any Organovo debt at the Closing and further subject to (i) an increase on a dollar-for-dollar basis by the amount that Organovo's net cash at the Closing is greater than $22.0 million, (ii) a reduction on a dollar-for-dollar basis by the amount that Organovo's net cash at the Closing is less than $22.0 million and (iii) an increase of $1.5 million for value Tarveda attributed to Organovo intellectual property, (if Organovo does not sell any intellectual property or other remaining assets)), by $200 million (less any Tarveda debt at the Closing other than its senior secured credit facility with Oxford plus $1.5 million for value Tarveda attributed to Organovo intellectual property (if Organovo does not sell any intellectual property or other remaining assets)).

The Merger Agreement does not include a price-based termination right, and there will be no adjustment to the total number of shares of Organovo common stock that Tarveda stockholders will be entitled to receive for changes in the market price of Organovo common stock. Accordingly, the market value of the shares of Organovo common stock issued pursuant to the Merger will depend on the market value of the shares of Organovo common stock at the time the Merger closes, and could vary significantly from the market value on the date of this proxy statement/prospectus/information statement.

No fractional shares of Organovo common stock will be issuable pursuant to the Merger to Tarveda stockholders. Instead, each Tarveda stockholder who would otherwise be entitled to receive a fraction of a share of Organovo common stock, after aggregating all fractional shares of Organovo common stock issuable to such stockholder, will be entitled to receive in cash the dollar amount, rounded to the nearest whole cent, without interest, determined by multiplying such fraction by the closing price of a share of Organovo common stock as quoted on The Nasdaq Stock Market, on the date the Merger becomes effective.

The Merger Agreement provides that, at the Effective Time, Organovo will deposit with an exchange agent acceptable to Organovo and Tarveda stock certificates representing the shares of Organovo common stock issuable to the Tarveda stockholders and a sufficient amount of cash to make payments in lieu of fractional shares.

The Merger Agreement provides that, promptly after the Effective Time, the exchange agent will mail to each record holder of Tarveda common stock immediately prior to the Effective Time a letter of transmittal and instructions for surrendering and exchanging the record holder's Tarveda stock certificates for shares of Organovo common stock. Upon surrender of a Tarveda common stock certificate for exchange to the exchange agent, together with a duly signed letter of transmittal and such other documents as the exchange agent or Organovo may reasonably require, the Tarveda stock certificate surrendered will be cancelled and the holder of the Tarveda stock certificate will be entitled to receive the following:

- a certificate representing the number of whole shares of Organovo common stock that such holder has the right to receive pursuant to the provisions of the Merger Agreement;
- cash in lieu of any fractional share of Organovo common stock; and
- dividends or other distributions, if any, declared or made with respect to Organovo common stock with a record date after the Effective Time.

At the Effective Time, all holders of certificates representing shares of Tarveda common stock or Tarveda preferred stock that were outstanding immediately prior to the Effective Time, other than shares held by stockholders who have exercised and perfected appraisal rights or dissenters' rights as more fully described in "*The Merger — Appraisal Rights and Dissenters' Rights*" below, will cease to have any rights as stockholders of Tarveda. In addition, no transfer of Tarveda common stock or Tarveda preferred stock after the Effective Time will be registered on the stock transfer books of Tarveda.

If any Tarveda stock certificate has been lost, stolen or destroyed, Tarveda may, in its discretion, and as a condition to the delivery of any shares of Organovo common stock, require the owner of such lost, stolen or destroyed certificate to deliver an affidavit claiming such certificate has been lost, stolen or destroyed.

From and after the Effective Time, until it is surrendered, each certificate that previously evidenced Tarveda common stock or Tarveda preferred stock will be deemed to represent only the right to receive shares of Organovo common stock, and cash in lieu of any fractional share of Organovo common stock.

Organovo will not pay dividends or other distributions on any shares of Organovo common stock to be issued in exchange for any unsurrendered Tarveda stock certificate until the Tarveda stock certificate is surrendered as provided in the Merger Agreement.

Effective Time of the Merger

The Merger Agreement requires the parties to consummate the Merger within two business days after all of the conditions to the consummation of the Merger contained in the Merger Agreement are satisfied or waived, including the adoption of the Merger Agreement by the stockholders of Tarveda and the approval by the Organovo stockholders of the approval of the issuance of Organovo common stock in the Merger in accordance with the terms of the Merger Agreement and an amendment to the certificate of incorporation of Organovo effecting the proposed Organovo Reverse Stock Split. The Merger will become effective upon the filing of a certificate of merger with the Secretary of State of the State of Delaware or at such later time as is agreed by Organovo and Tarveda and specified in the certificate of merger. Neither Organovo nor Tarveda can predict the exact timing of the consummation of the Merger.

Regulatory Approvals

In the United States, Organovo must comply with applicable federal and state securities laws and the rules and regulations of Nasdaq in connection with the issuance of shares of Organovo common stock and the filing of this proxy statement/prospectus/information statement with the SEC.

Tax Treatment of the Merger

Organovo and Tarveda intend the Merger to qualify as a "reorganization" within the meaning of Section 368(a) of the Code. Each of Organovo and Tarveda will use its reasonable best efforts to cause the Merger to qualify as a reorganization within the meaning of Section 368(a) of the Code, and not to permit or cause any affiliate or any subsidiary of Organovo or Tarveda to, take any action or cause any action to be taken that would cause the Merger to fail to qualify as a reorganization under Section 368(a) of the Code. It is a condition to Organovo's obligation to complete the Merger that Organovo receive a written opinion of its counsel, Gunderson Dettmer (or if Gunderson Dettmer is unable to issue such an opinion, Organovo's Replacement Counsel), to the effect that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. It is a condition to Tarveda's obligation to complete the Merger that Tarveda receive an opinion of its counsel, Cooley LLP (or if Cooley LLP is unable to issue such an opinion, Tarveda's Replacement Counsel), to the effect that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. For a description of certain material U.S. federal tax consequences of the Merger, see the section titled "— *Certain Material U.S. Federal Income Tax Consequences of the Merger*" below.

Certain Material U.S. Federal Income Tax Consequences of the Merger

The following is a discussion of material U.S. federal income tax consequences of the Merger applicable to U.S. Holders (as defined below) who exchange their Tarveda common stock for Organovo common stock in the Merger assuming the Merger is consummated as contemplated by the Merger Agreement. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the Code, U.S. Treasury Regulations promulgated thereunder, judicial decisions and published rulings and administrative pronouncements of the IRS each as in effect as of the date of the Merger. These authorities are subject to change and differing interpretations. Any such change, which could be retroactive, could alter the tax consequences to holders of Tarveda common stock as described herein.

This discussion does not address all U.S. federal income tax consequences that may be relevant to the particular circumstances of a Tarveda common stockholder. In addition, it does not address consequences relevant to holders of Tarveda common stock that are subject to particular U.S. or non-U.S. tax rules, including, without limitation:

- persons who are not U.S. Holders as defined below;
- persons who do not hold their Tarveda common stock as a "capital asset" within the meaning of Section 1221 of the Code;
- persons who hold their Tarveda common stock in a functional currency other than the U.S. dollar;
- persons who hold Tarveda common stock that constitutes "qualified small business stock" under Section 1202 of the Code or as "Section 1244 stock" for purposes of Section 1244 of the Code;
- persons holding Tarveda common stock as part of an integrated investment (including a "straddle," pledge against currency risk, "constructive" sale or "conversion" transaction or other integrated or risk reduction transactions) consisting of shares of Tarveda common stock and one or more other positions;
- banks, insurance companies, mutual funds, tax-exempt entities, financial institutions, broker-dealers, real estate investment trusts or regulated investment companies;
- partnerships or other entities classified as partnerships or disregarded entities for U.S. federal income tax purposes, S corporations or other pass-through entities (including hybrid entities);
- persons who acquired their Tarveda common stock pursuant to the exercise of compensatory options or in other compensatory transactions;
- persons who acquired their Tarveda common stock pursuant to the exercise of warrants or conversion rights under convertible instruments;

- persons who acquired their Tarveda common stock in a transaction subject to the gain rollover provisions of Section 1045 of the Code; and
- persons who hold their Tarveda common stock through individual retirement accounts or other tax-deferred accounts.

For purposes of this discussion, a "U.S. Holder" is a beneficial owner of Tarveda common stock that, for U.S. federal income tax purposes, is or is treated as:

- an individual who is (or is treated as) a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if either (i) a court within the United States is able to exercise primary supervision over the administration of such trust and one or more United States persons (within the meaning of Section 7701(a)(30) of the Code) are authorized or have the authority to control all substantial decisions of such trust, or (ii) the trust was in existence on August 20, 1996 and has a valid election in effect under applicable Treasury Regulations to be treated as a United States person for U.S. federal income tax purposes.

If an entity treated as a partnership for U.S. federal income tax purposes holds Tarveda common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. If you are a partnership or a partner of a partnership holding Tarveda common stock or any other person excluded from this discussion, you should consult your tax advisor regarding the tax consequences of the Merger.

In addition, the following discussion does not address (i) any U.S. federal non-income tax consequences of the Merger, including estate, gift or other tax consequences, (ii) any state, local or non-U.S. tax consequences of the Merger, (iii) the Medicare contribution tax on net investment income or the alternative minimum tax, (iv) the tax consequences of transactions effectuated before, after or at the same time as the Merger (whether or not they are in connection with the Merger), including, without limitation, transactions in which Tarveda common stock is acquired or Tarveda preferred stock is converted to Tarveda common stock, and (v) the tax consequences to holders of options, warrants or similar rights to acquire Tarveda common stock.

IN LIGHT OF THE FOREGOING, HOLDERS OF TARVEDA COMMON STOCK SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE TAX CONSEQUENCES TO THEM OF THE MERGER, INCLUDING THE APPLICABLE U.S. FEDERAL, STATE, LOCAL AND NON-U.S. INCOME AND OTHER TAX CONSEQUENCES, AND ANY TAX REPORTING REQUIREMENTS OF THE MERGER AND RELATED TRANSACTIONS IN LIGHT OF THEIR PARTICULAR CIRCUMSTANCES. THIS DISCUSSION OF TAX CONSEQUENCES WAS NOT INTENDED OR WRITTEN TO BE USED, AND CANNOT BE USED, BY ANY TAXPAYER FOR THE PURPOSE OF AVOIDING PENALTIES THAT MAY BE IMPOSED ON THE TAXPAYER.

The following is a discussion of the material U.S. federal income tax consequences of the Merger applicable to U.S. Holders who exchange their Tarveda common stock for Organovo common stock in the Merger. In addition, it is a condition to each of the parties' obligations to complete the Merger that each receives a written opinion of its counsel (or Organovo's Replacement Counsel or Tarveda's Replacement Counsel, in each case, if applicable) to the effect that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. In rendering their opinions, counsel will assume that the statements and facts concerning the Merger set forth in this proxy statement/prospectus/information statement and in the Merger Agreement, are true and accurate in all respects, and that the Merger will be completed in accordance with this proxy statement/

prospectus/information statement and the Merger Agreement. Counsels' opinions will also assume the truth and accuracy of certain representations and covenants as to factual matters made by Organovo, Tarveda and Merger Sub in tax representation letters provided to counsel. In addition, the tax opinions will be based on the law in effect on the date of the opinions and will assume that there will be no change in applicable law between such date and the time of the Merger. If any of these assumptions is inaccurate, the tax consequences of the Merger could differ from those described in this proxy statement/prospectus/information statement.

No ruling from the IRS has been or will be requested with respect to the tax consequences of the Merger. Opinions of counsel do not bind the courts or the IRS, nor will they preclude the IRS from adopting a position contrary to those expressed in the opinions. Subject to the qualifications and assumptions described in this proxy statement/prospectus/information statement, the Merger will be treated for U.S. federal income tax purposes as a "reorganization" within the meaning of Section 368(a) of the Code. Accordingly, the tax consequences to U.S. Holders of Tarveda common stock will be as follows:

- a U.S. Holder generally will not recognize gain or loss upon the exchange of Tarveda common stock for Organovo common stock pursuant to the Merger, except to the extent of cash received in lieu of a fractional share of Organovo common stock as described below;
- a U.S. Holder who receives cash in lieu of a fractional share of Organovo common stock in the Merger generally will recognize capital gain or loss in an amount equal to the difference between the amount of cash received instead of a fractional share and the stockholder's tax basis allocable to such fractional share;
- a U.S. Holder's aggregate tax basis for the shares of Organovo common stock received in the Merger (including any fractional share interest for which cash is received) generally will equal the stockholder's aggregate tax basis in the shares of Tarveda common stock surrendered in the Merger; and
- the holding period of the shares of Organovo common stock received by a U.S. Holder in the Merger generally will include the holding period of the shares of Tarveda common stock surrendered in exchange therefor.

Gain or loss recognized by a U.S. Holder who receives cash in lieu of a fractional share of Organovo common stock will constitute capital gain or loss and any such gain or loss will constitute long-term capital gain or loss if the U.S. Holder's holding period in the Tarveda common stock surrendered in the Merger is more than one year as of the effective date of the Merger. Under current law, long-term capital gains of non-corporate taxpayers are taxed at reduced U.S. federal income tax rates. Under current law, the deductibility of capital losses is subject to limitations. In addition, for purposes of the above discussion of the bases and holding periods for shares of Tarveda common stock and Organovo common stock, U.S. Holders who acquired different blocks of Tarveda common stock at different times for different prices must calculate their gains and losses and holding periods separately for each identifiable block of such stock exchanged in the Merger.

As provided in Treasury Regulations Section 1.368-3(d), each U.S. Holder who receives shares of Organovo common stock in the Merger is required to retain permanent records pertaining to the Merger. Such records should specifically include information regarding the amount, basis and fair market value of all transferred property, and relevant facts regarding any liabilities assumed or extinguished as part of such reorganization. Additionally, U.S. Holders who owned immediately before the Merger at least 1% (by vote or value) of the total outstanding stock of Tarveda and each U.S. Holder with a basis in their Tarveda common stock of $1,000,000 or more are required to attach a statement to their tax returns for the year in which the Merger is consummated that contains the information listed in Treasury Regulation Section 1.368-3(b). Such statement must include the U.S. Holder's tax basis in such holder's Tarveda common stock surrendered in the Merger, the fair market value of such stock, the date of the Merger and the name and employer identification number of each of Tarveda and Organovo.

If the Merger fails to qualify as a reorganization within the meaning of Section 368(a) of the Code, then a U.S. Holder would recognize gain or loss upon the exchange of Tarveda common stock for Organovo common stock equal to the difference between the fair market value, at the time of the Merger, of the Organovo common stock received in the Merger (including any cash received in lieu of a fractional share) and such U.S. Holder's adjusted tax basis in the Tarveda common stock surrendered in the Merger. Such gain or loss would be long-term capital gain or loss if the Tarveda common stock was held for more than one year at the time of the Merger. In such event, the aggregate tax basis of Organovo common stock received in the Merger would equal its fair market value at the time of the consummation of the Merger, and the holding period of such Organovo common stock would commence the day after the consummation of the Merger.

Information Reporting and Backup Withholding

A U.S. Holder of Tarveda common stock may be subject to information reporting and backup withholding for U.S. federal income tax purposes on cash paid in lieu of fractional shares in connection with the Merger. The current backup withholding rate is 24%. Backup withholding will not apply, however, to a holder who (i) furnishes a correct taxpayer identification number and certifies the holder is not subject to backup withholding on IRS Form W-9, (ii) provides a certification of foreign status on an appropriate IRS Form W-8 or (iii) otherwise establishes the holder is exempt from backup withholding. U.S. Holders of Tarveda common stock should consult their tax advisors regarding their qualification for an exemption from backup withholding and the procedures for obtaining such an exemption. If a U.S. Holder does not provide a correct taxpayer identification number on IRS Form W-9 or other proper certification, the stockholder may be subject to penalties imposed by the IRS. Any amounts withheld under the backup withholding rules may be refunded or allowed as a credit against such stockholder's federal income tax liability, if any, provided the required information is timely furnished to the IRS. U.S. Holders should consult their tax advisors regarding their qualification for an exemption from backup withholding and the procedures for obtaining such an exemption. In the event a U.S. Holder is subject to backup withholding, such stokcholder should see his, her, or its tax advisor to determine if he, she or it is entitled to any tax credit, tax refund or other tax benefit as a result of such backup withholding.

The Nasdaq Stock Market Listing

Organovo common stock currently is listed on The Nasdaq Capital Market under the symbol "ONVO." Organovo has agreed to use commercially reasonable efforts to maintain its existing listing on The Nasdaq Capital Market, and to obtain approval for listing on Nasdaq of the shares of Organovo common stock that Tarveda stockholders will be entitled to receive pursuant to the Merger. In addition, under the Merger Agreement, each party's obligation to complete the Merger is subject to the satisfaction or waiver by each of the parties, at or prior to the Merger, of various conditions, including that the existing shares of Organovo common stock must have been continually listed on The Nasdaq Global Market or The Nasdaq Capital Market, and Organovo must have caused the shares of Organovo common stock to be issued in the Merger to be approved for listing on Nasdaq as of the consummation of the Merger.

Prior to consummation of the Merger, Organovo intends to file an initial listing application with The Nasdaq Capital Market. If such application is accepted, Organovo anticipates that its common stock will be listed on The Nasdaq Capital Market following the consummation of the Merger under the trading symbol "TVDA."

Anticipated Accounting Treatment

The Merger will be treated by Organovo as a reverse recapitalization in accordance with accounting principles generally accepted in the United States. For accounting purposes, Tarveda is considered to be acquiring Organovo in this transaction. Under reverse recapitalization accounting, the cost of asset acquisition will be allocated to the individual assets acquired or liabilities assumed, based on their relative fair values. No goodwill or intangible assets are expected to be recognized and any excess consideration transferred over the fair value of the net assets of Organovo following determination of the actual purchase consideration for Organovo

will be reflected as an adjustment to equity. Consequently, the financial statements of Tarveda reflect the operations of the acquiror for accounting purposes together with a deemed issuance of shares, equivalent to the shares held by the former stockholders of the legal acquiror (Organovo) and a recapitalization of the equity of the accounting acquiror (Tarveda). Management of Organovo and Tarveda have made a preliminary estimated purchase price as described in Note 2 to the unaudited pro forma condensed combined financial statements and is subject to change and interpretation. The net tangible and intangible assets acquired and liabilities assumed in connection with the transaction are at their estimated Merger date fair values. A final determination of these estimated fair values, which cannot be made prior to the completion of the transaction, will be based on the actual net tangible and intangible assets of Organovo that exist as of the date of completion of the transaction.

Appraisal Rights and Dissenters' Rights

Delaware Law

If the Merger is completed, Tarveda stockholders who do not deliver a written consent approving the Merger are entitled to appraisal rights under Section 262 of the DGCL ("Section 262"), provided that they comply with the conditions established by Section 262. Holders of Organovo common stock are not entitled to appraisal rights under Delaware law in connection with the Merger.

The discussion below is not a complete summary regarding a Tarveda stockholder's appraisal rights under Delaware law and is qualified in its entirety by reference to the text of the relevant provisions of Delaware law, which are attached to this proxy statement/prospectus/information statement as *Annex C*.

Stockholders intending to exercise appraisal rights should carefully review *Annex C*. Failure to follow precisely any of the statutory procedures set forth in *Annex C* may result in a termination or waiver of these rights. This summary does not constitute legal or other advice, nor does it constitute a recommendation that Tarveda stockholders exercise their appraisal rights under Delaware law.

Under Section 262, where a merger is adopted by stockholders by written consent in lieu of a meeting of stockholders pursuant to Section 228 of the DGCL, either the constituent corporation before the effective date of the merger or the surviving corporation, within 10 days after the effective date of the merger, must notify each stockholder of the constituent corporation entitled to appraisal rights of the approval of the merger, the effective date of the merger and that appraisal rights are available.

If the Merger is completed, within 10 days after the effective date of the Merger Tarveda will notify its stockholders that the Merger has been approved, the effective date of the Merger and that appraisal rights are available to any stockholder who has not approved the Merger. Holders of shares of Tarveda capital stock who desire to exercise their appraisal rights must deliver a written demand for appraisal to Tarveda within 20 days after the date of mailing of that notice, and that stockholder must not have delivered a written consent approving the Merger. A demand for appraisal must reasonably inform Tarveda of the identity of the stockholder and that such stockholder intends thereby to demand appraisal of the shares of Tarveda capital stock held by such stockholder. Failure to deliver a written consent approving the Merger will not in and of itself constitute a written demand for appraisal satisfying the requirements of Section 262. All demands for appraisal should be addressed to Tarveda Therapeutics, Inc., 134 Coolidge Ave., Watertown, MA 02472, Attention: Corporate Secretary, and should be executed by, or on behalf of, the record holder of shares of Tarveda capital stock. ALL DEMANDS MUST BE RECEIVED BY TARVEDA WITHIN TWENTY (20) DAYS AFTER THE DATE TARVEDA MAILS A NOTICE TO ITS STOCKHOLDERS NOTIFYING THEM THAT THE MERGER HAS BEEN APPROVED, THE EFFECTIVE DATE OF THE MERGER AND THAT APPRAISAL RIGHTS ARE AVAILABLE TO ANY STOCKHOLDER WHO HAS NOT APPROVED THE MERGER.

If you fail to deliver a written demand for appraisal within the time period specified above, you will be entitled to receive the Merger consideration for your shares of Tarveda capital stock as provided for in the Merger Agreement, but you will have no appraisal rights with respect to your shares of Tarveda capital stock.

To be effective, a demand for appraisal by a holder of shares of Tarveda capital stock must be made by, or in the name of, the registered stockholder, fully and correctly, as the stockholder's name appears on the stockholder's stock certificate(s). Beneficial owners who do not also hold the shares of record may not directly make appraisal demands to Tarveda. The beneficial owner must, in these cases, have the registered owner, such as a broker, bank or other custodian, submit the required demand in respect of those shares. If shares are owned of record in a fiduciary capacity, such as by a trustee, guardian or custodian, execution of a demand for appraisal should be made by or for the fiduciary; and if the shares are owned of record by more than one person, as in a joint tenancy or tenancy in common, the demand should be executed by or for all joint owners. An authorized agent, including an authorized agent for two or more joint owners, may execute the demand for appraisal for a stockholder of record; however, the agent must identify the record owner or owners and expressly disclose the fact that, in executing the demand, he or she is acting as agent for the record owner. A record owner, such as a broker, who holds shares as a custodian for others, may exercise the record owner's right of appraisal with respect to the shares held for one or more beneficial owners, while not exercising this right for other beneficial owners. In that case, the written demand should state the number of shares as to which appraisal is sought. Where no number of shares is expressly mentioned, the demand will be presumed to cover all shares held in the name of the record owner. In addition, the stockholder must continuously hold the shares of record from the date of making the demand through the Effective Time.

If you hold your shares of Tarveda capital stock in a brokerage account or in other custodian form and you wish to exercise appraisal rights, you should consult with your bank, broker or other custodian to determine the appropriate procedures for the making of a demand for appraisal by the custodian.

At any time within 60 days after the Effective Time, any stockholder who has demanded an appraisal, but has neither commenced an appraisal proceeding or joined an appraisal proceeding as a named party, has the right to withdraw such stockholder's demand and accept the terms of the Merger by delivering a written withdrawal to Tarveda. If, following a demand for appraisal, you have withdrawn your demand for appraisal in accordance with Section 262, you will have the right to receive the Merger consideration for your shares of Tarveda capital stock.

Within 120 days after the effective date of the Merger, any stockholder who has delivered a demand for appraisal in accordance with Section 262 will, upon written request to the surviving corporation, be entitled to receive a written statement setting forth the aggregate number of shares not voted in favor of the Merger Agreement and with respect to which demands for appraisal rights have been received and the aggregate number of holders of these shares. This written statement will be mailed to the requesting stockholder within ten days after the stockholder's written request is received by the surviving corporation or within ten days after expiration of the period for delivery of demands for appraisal, whichever is later. Within 120 days after the effective date of the Merger, either the surviving corporation or any stockholder who has delivered a demand for appraisal in accordance with Section 262 may file a petition in the Delaware Court of Chancery demanding a determination of the fair value of the shares held by all such stockholders. Upon the filing of the petition by a stockholder, service of a copy of the petition must be made upon the surviving corporation. The surviving corporation has no obligation to file a petition in the Delaware Court of Chancery in the event there are dissenting stockholders, and Tarveda, which is expected to be the surviving corporation, has no present intent to file a petition in the Delaware Court of Chancery. Accordingly, the failure of a stockholder to file a petition within the period specified could nullify the stockholder's previously written demand for appraisal.

If a petition for appraisal is duly filed by a stockholder and a copy of the petition is delivered to the surviving corporation, the surviving corporation will then be obligated, within 20 days after receiving service of a copy of the petition, to provide the Delaware Court of Chancery with a duly verified list containing the names and addresses of all stockholders who have demanded an appraisal of their shares and with whom agreements as to the value of their shares have not been reached by the surviving corporation. After notice to dissenting stockholders who demanded appraisal of their shares, the Delaware Court of Chancery is empowered to conduct a hearing upon the petition, and to determine those stockholders who have complied with Section 262 and who have become entitled to the appraisal rights provided thereby. The Delaware Court of Chancery may require the

stockholders who have demanded appraisal for their shares to submit their stock certificates to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any stockholder fails to comply with that direction, the Delaware Court of Chancery may dismiss the proceedings as to that stockholder.

After determination of the stockholders entitled to appraisal of their shares, the Delaware Court of Chancery will appraise the "fair value" of the shares owned by those stockholders. This value will be exclusive of any element of value arising from the accomplishment or expectation of the Merger, but may include a fair rate of interest, if any, upon the amount determined to be the fair value. When the value is determined, the Delaware Court of Chancery will direct the payment of the value, with interest thereon accrued during the pendency of the proceeding, if the Delaware Court of Chancery so determines, to the stockholders entitled to receive the same, upon surrender by the holders of the certificates representing those shares.

In determining fair value, and, if applicable, a fair rate of interest, the Delaware Court of Chancery is required to take into account all relevant factors. In *Weinberger v. UOP, Inc.*, the Delaware Supreme Court discussed the factors that could be considered in determining fair value in an appraisal proceeding, stating that "proof of value by any techniques or methods which are generally considered acceptable in the financial community and otherwise admissible in court" should be considered, and that "fair price obviously requires consideration of all relevant factors involving the value of a company."

Section 262 provides that fair value is to be "exclusive of any element of value arising from the accomplishment or expectation of the merger." In *Cede & Co. v. Technicolor, Inc.*, the Delaware Supreme Court stated that this exclusion is a **"**narrow exclusion [that] does not encompass known elements of value,**"** but which rather applies only to the speculative elements of value arising from such accomplishment or expectation. In Weinberger, the Delaware Supreme Court construed Section 262 to mean that "elements of future value, including the nature of the enterprise, which are known or susceptible of proof as of the date of the merger and not the product of speculation, may be considered.**"**

You should be aware that the fair value of your shares as determined under Section 262 could be more than, the same as, or less than the value that you are entitled to receive under the terms of the Merger Agreement.

Costs of the appraisal proceeding may be imposed upon the surviving corporation and the stockholders participating in the appraisal proceeding by the Delaware Court of Chancery as the Court deems equitable in the circumstances. Upon the application of a stockholder, the Delaware Court of Chancery may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorneys' fees and the fees and expenses of experts, to be charged pro rata against the value of all shares entitled to appraisal. In the absence of such a determination of assessment, each party bears its own expenses. Any stockholder who had demanded appraisal rights will not, after the Effective Time, be entitled to vote shares subject to that demand for any purpose or to receive payments of dividends or any other distribution with respect to those shares, other than with respect to payment as of a record date prior to the Effective Time; however, if no petition for appraisal is filed within 120 days after the Effective Time, or if the stockholder delivers a written withdrawal of his or her demand for appraisal and an acceptance of the terms of the Merger within 60 days after the Effective Time, then the right of that stockholder to appraisal will cease and that stockholder will be entitled to receive the Merger consideration for shares of his or her Organovo capital stock pursuant to the Merger Agreement. Any withdrawal of a demand for appraisal made more than 60 days after the Effective Time may only be made with the written approval of the surviving corporation. No appraisal proceeding in the Delaware Court of Chancery will be dismissed as to any stockholder without the approval of the court.

Failure to follow the steps required by Section 262 for perfecting appraisal rights may result in the loss of appraisal rights. In view of the complexity of Section 262, stockholders who may wish to dissent from the Merger and pursue appraisal rights should consult their legal advisors.

THE MERGER AGREEMENT

The following is a summary of the material terms of the Merger Agreement. A copy of the Merger Agreement is attached as Annex A to this proxy statement/prospectus/information statement and is incorporated by reference into this proxy statement/prospectus/information statement. The Merger Agreement has been attached to this proxy statement/prospectus/information statement to provide you with information regarding its terms. It is not intended to provide any other factual information about Organovo, Tarveda or Merger Sub. The following description does not purport to be complete and is qualified in its entirety by reference to the Merger Agreement. You should refer to the full text of the Merger Agreement for details of the Merger and the terms and conditions of the Merger Agreement.

The Merger Agreement contains representations and warranties that Organovo and Merger Sub, on the one hand, and Tarveda, on the other hand, have made to one another as of specific dates. These representations and warranties have been made for the benefit of the other parties to the Merger Agreement and may be intended not as statements of fact but rather as a way of allocating the risk to one of the parties if those statements prove to be incorrect. In addition, the assertions embodied in the representations and warranties are qualified by information in confidential disclosure schedules exchanged by the parties in connection with signing the Merger Agreement. While Organovo and Tarveda do not believe that these disclosure schedules contain information required to be publicly disclosed under the applicable securities laws, other than information that has already been so disclosed, the disclosure schedules do contain information that modifies, qualifies and creates exceptions to the representations and warranties set forth in the attached Merger Agreement. Accordingly, you should not rely on the representations and warranties as current characterizations of factual information about Organovo, Merger Sub or Tarveda, because they were made as of specific dates, may be intended merely as a risk allocation mechanism between Organovo, Merger Sub and Tarveda and are modified by the disclosure schedules. If Organovo or Tarveda becomes aware of material facts that contradict the representations and warranties in the Merger Agreement, Organovo or Tarveda, as applicable, will disclose those material facts in the public filings that it makes with the SEC if it determines that it has a legal obligation to do so.

General

Under the Merger Agreement, Merger Sub, a wholly-owned subsidiary of Organovo formed by Organovo in connection with the Merger, will merge with and into Tarveda, with Tarveda surviving as a wholly-owned subsidiary of Organovo.

Merger Consideration

Immediately prior to the Effective Time, each share of Tarveda preferred stock outstanding at such time will be converted into shares of Tarveda common stock at a ratio determined in accordance with the Tarveda certificate of incorporation then in effect. Additionally, at the Effective Time, all outstanding shares of Tarveda common stock, and all outstanding options and warrants to purchase Tarveda common stock and preferred stock, respectively, shall convert into the right to receive Organovo common stock as follows:

- each share of Tarveda common stock outstanding immediately prior to the Effective Time (excluding certain shares of Tarveda common stock that may be cancelled pursuant to the Merger Agreement and shares held by stockholders who have exercised and perfected appraisal rights or dissenters' rights as more fully described in "*The Merger — Appraisal Rights and Dissenters' Rights*" (each such share, a "dissenting share")) will automatically be converted into the right to receive an estimated number of shares of Organovo common stock equal to 0.1311, subject to adjustment to account for the proposed Organovo Reverse Stock Split. The estimated Exchange Ratio is based upon Organovo's and Tarveda's capitalization immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted based on the amount of Organovo net cash, Organovo and Tarveda debt and changes in the capitalization of Organovo or Tarveda prior to the Closing;

- each option to purchase shares of Tarveda common stock outstanding and unexercised immediately prior to the Effective Time will be assumed by Organovo and will become an option, subject to vesting, to purchase that number of shares of the common stock of Organovo multiplied by the estimated Exchange Ratio equal to 0.1311, at an exercise price equal to the per share exercise price of such Tarveda option divided by the estimated Exchange Ratio equal to 0.1311 subject to adjustment to account for the proposed Organovo Reverse Stock Split; and
- each warrant to purchase shares of Tarveda capital stock outstanding and unexercised immediately prior to the Effective Time will be assumed by Organovo and will become a warrant to purchase that number of shares of the Organovo common stock multiplied by the estimated Exchange Ratio equal to 0.1311, at an exercise price equal to the per share exercise price of such Tarveda warrant divided by the estimated Exchange Ratio equal to 0.1311 subject to adjustment to account for the proposed Organovo Reverse Stock Split.

The Exchange Ratio provided herein is an estimate based upon Organovo's and Tarveda's capitalization numbers immediately prior to the date of this proxy statement/prospectus/information statement. The final Exchange Ratio will be adjusted based on the amount of Organovo net cash, Organovo and Tarveda debt and changes in the capitalization of Organovo or Tarveda prior to the Closing. The final Exchange Ratio is the quotient determined by *dividing* the Surviving Corporation Allocation Shares (as defined below) by the total number of shares of Tarveda common stock outstanding immediately prior to the Closing as expressed on a fully-diluted and as-converted to common stock basis.

The "Surviving Corporation Allocation Shares" is the number determined by first *dividing* the total number of Organovo Outstanding Shares by the Organovo Allocation Percentage and then *subtracting* the Organovo Outstanding Shares. The Organovo Allocation Percentage is derived by dividing $50.0 million (less any Organovo debt at the Closing and further subject to (i) an increase on a dollar-for-dollar basis by the amount that Organovo's net cash at the Closing is greater than $22.0 million, (ii) a reduction on a dollar-for-dollar basis by the amount that Organovo's net cash at the Closing is less than $22.0 million and (iii) an increase of $1.5 million for value Tarveda attributed to Organovo intellectual property (if Organovo does not sell any intellectual property or other remaining assets)), by $200 million (less any Tarveda debt at the Closing other than its senior secured credit facility with Oxford plus $1.5 million for value Tarveda attributed to Organovo intellectual property (if Organovo does not sell any intellectual property or other remaining assets)).

The Merger Agreement does not include a price-based termination right, so there will be no adjustment to the total number of shares of Organovo common stock that Tarveda stockholders, optionholders and warrantholders will be entitled to receive for changes in the market price of Organovo common stock. Accordingly, the market value of the shares of Organovo common stock issued pursuant to the Merger will depend on the market value of the shares of Organovo common stock at the time the Merger closes, and could vary significantly from the market value on the date of this proxy statement/prospectus/information statement.

No fractional shares of Organovo common stock will be issuable pursuant to the Merger to Tarveda stockholders. Instead, each Tarveda stockholder who would otherwise be entitled to receive a fraction of a share of Organovo common stock, after aggregating all fractional shares of Organovo common stock issuable to such stockholder, will be entitled to receive in cash the dollar amount, rounded to the nearest whole cent, without interest, determined by multiplying such fraction by the closing price of a share of Organovo common stock as quoted on Nasdaq, on the date the Merger becomes effective.

The Merger Agreement provides that, at the Effective Time, Organovo will deposit with an exchange agent acceptable to Organovo and Tarveda stock certificates representing the shares of Organovo common stock issuable to the Tarveda stockholders and a sufficient amount of cash to make payments in lieu of fractional shares.

The Merger Agreement provides that, promptly after the Effective Time, the exchange agent will mail to each record holder of Tarveda common stock immediately prior to the Effective Time a letter of transmittal and

instructions for surrendering and exchanging the record holder's Tarveda stock certificates for shares of Organovo common stock. Upon surrender of a Tarveda stock certificate for exchange to the exchange agent, together with a duly signed letter of transmittal and such other documents as the exchange agent or Organovo may reasonably require, the Tarveda stock certificate surrendered will be cancelled and the holder of the Tarveda stock certificate will be entitled to receive the following:

- a certificate (or non-certificated book entry) representing the number of whole shares of Organovo common stock that such holder has the right to receive pursuant to the provisions of the Merger Agreement;
- cash in lieu of any fractional share of Organovo common stock; and
- dividends or other distributions, if any, declared or made with respect to Organovo common stock with a record date after the Effective Time.

At the Effective Time, all holders of certificates representing shares of Tarveda common stock or Tarveda preferred stock that were outstanding immediately prior to the Effective Time (other than dissenting shares) will cease to have any rights as stockholders of Tarveda. In addition, no transfer of Tarveda common stock or Tarveda preferred stock after the Effective Time will be registered on the stock transfer books of Tarveda.

If any Tarveda stock certificate has been lost, stolen or destroyed, Organovo may, in its discretion, and as a condition to the delivery of any certificate or book entry representing shares of Organovo common stock, require the owner of such lost, stolen or destroyed certificate to deliver an affidavit claiming such certificate has been lost, stolen or destroyed.

From and after the Effective Time, until it is surrendered, each certificate that previously evidenced Tarveda common stock or Tarveda preferred stock (other than dissenting shares) will be deemed to represent only the right to receive shares of Organovo common stock and cash in lieu of any fractional share of Organovo common stock. Organovo will not pay dividends or other distributions on any shares of Organovo common stock to be issued in exchange for any unsurrendered Tarveda stock certificate until the Tarveda stock certificate is surrendered as provided in the Merger Agreement.

Treatment of Tarveda Stock Options and Warrants

At the Effective Time, each option to purchase Tarveda common stock that is outstanding and unexercised immediately prior to the Effective Time under the 2011 Tarveda Plan, whether or not vested, will be converted into an option to purchase Organovo common stock. Organovo will assume the 2011 Tarveda Plan. All rights with respect to Tarveda common stock under Tarveda options assumed by Organovo will be converted into rights with respect to Organovo common stock. Accordingly, from and after the Effective Time, each Tarveda stock option assumed by Organovo may be exercised for such number of shares of Organovo common stock as is determined by multiplying the number of shares of Tarveda common stock subject to the option by the Exchange Ratio (which is subject to adjustments to account for the effect of the proposed Organovo Reverse Stock Split prior to the consummation of the Merger) and rounding that result down to the nearest whole number of shares of Organovo common stock. The per share exercise price of the converted option will be determined by dividing the existing exercise price of the option by the Exchange Ratio (which is subject to adjustments to account for the effect of the proposed Organovo Reverse Stock Split prior to the consummation of the Merger) and rounding that result up to the nearest whole cent. Any restrictions on the exercise of any Tarveda option assumed by Organovo will continue following the conversion and the term, exercisability, vesting schedules and other provisions of assumed Tarveda options will generally remain unchanged; provided, that any Tarveda options assumed by Organovo may be subject to adjustment to reflect changes in Organovo capitalization after the Effective of the Merger and that the Organovo board of directors or a committee thereof will succeed to the authority of the board of directors of Tarveda with respect to each assumed Tarveda option.

Tarveda has issued warrants to purchase shares of its Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series C Preferred Stock and Series D Preferred Stock. On December 14, 2019, each

outstanding warrant to purchase Series A Preferred Stock, Sereies B Preferred Stock, Series B-1 Preferred Stock, or Series C Preferred Stock became exercisable for the same number of shares of common stock as the number of shares of the applicable series of preferred stock the holder of such warrant would have received if the warrant had been exercised prior to December 14, 2019. On December 14, 2019, each outstanding warrant to purchase Series D Preferred Stock was amended and restated such they are exercisable for the same number of shares of Series 1 Preferred Stock as the number of shares of Series D Preferred Stock for they would have been exercisable prior to the amendment and restatement. Each outstanding warrant to purchase shares of Tarveda capital stock not terminated or exercised immediately prior to the Effective Time will be assumed by Organovo at the Effective Time in accordance with its terms and will become a warrant to purchase shares of Organovo common stock.

The number of shares of Organovo common stock subject to each assumed warrant will be determined by multiplying the number of shares of Tarveda common stock issuable (including upon conversion of the shares of Tarveda preferred stock issuable following exercise) upon exercise of such warrant, that were subject to such warrant prior to the Effective Time by the Exchange Ratio (which is subject to adjustments to account for the effect of the proposed Organovo Reverse Stock Split prior to the consummation of the Merger) and rounding that result down to the nearest whole number of shares of Organovo common stock. The per share exercise price for the Organovo common stock issuable upon exercise of each of the assumed warrants will be determined by dividing the per share exercise price of the Tarveda capital stock subject to each warrant as in effect immediately prior to the Effective Time by the Exchange Ratio (which is subject to adjustments to account for the effect of the proposed Organovo Reverse Stock Split prior to the consummation of the Merger) and rounding that result up to the nearest whole cent. Any restriction on a warrant assumed by Organovo will continue in effect and the term and other provisions of such warrant will otherwise remain unchanged.

Directors and Officers of Organovo Following the Merger

Pursuant to the Merger Agreement, all of the directors and executive officers of Organovo will resign at or prior to the Effective Time, provided, however, that two directors of Organovo will remain on the Organovo board of directors. Prior to the Effective Time but to be effective at the Effective Time, the Organovo board of directors will elect six designees selected by Tarveda to serve as members of the Organovo board of directors effective upon consummation of the Merger. The composition of the Organovo board of directors following the Effective Time in the aggregate are expected to satisfy the requisite independence requirements, as well as the sophistication and independence requirements for the required committees, pursuant to Nasdaq listing requirements. It is anticipated that after the Effective Time, the Organovo board of directors will be the following, along with two designees to be named by Organovo:

- Andrew J. Fromkin
- Dennis Ausiello, M.D.
- Nilesh Kumar, Ph.D.
- Guido Magni, M.D., Ph.D.
- Michael Metzger
- Aymeric Sallin, M.S.

It is anticipated that the executive officers of Organovo (each of whom are executive officers of Tarveda) upon the consummation of the Merger will be:

- Andrew J. Fromkin – President, Chief Executive Officer and Chairman
- Jeffrey D. Bloss, M.D. – Chief Medical Officer
- Brian K. Roberts – Chief Financial Officer

- Mark T. Bilodeau, Ph.D. – Chief Scientific Officer
- Sudhakar Kadiyala, Ph.D. – Executive Vice President, Strategy

Amendment to Certificate of Incorporation of Organovo

Stockholders of record of Organovo common stock on the record date for the Organovo special meeting will also be asked to approve the amendment to the certificate of incorporation of Organovo to effect the proposed Organovo Reverse Stock Split, which requires the affirmative vote of holders of a majority of the outstanding Organovo common stock on the record date for the Organovo special meeting.

Conditions to the Completion of the Merger

Each party's obligation to complete the Merger is subject to the satisfaction or waiver by each of the parties, at or prior to the Merger, of various conditions, which include the following:

- the Registration Statement, of which this proxy statement/prospectus/information statement is a part, must have become effective in accordance with the provisions of the Securities Act and must not be subject to any stop order or proceeding, or any proceeding threatened by the SEC, seeking a stop order;
- there must not have been issued any temporary restraining order, preliminary or permanent injunction or other order preventing the consummation of the Merger or transactions contemplated by the Merger Agreement by any court of competent jurisdiction or other governmental entity of competent jurisdiction that remains in effect, and no law, statute, rule, regulation, ruling or decree shall be in effect which has the effect of making the consummation of the Merger or transactions contemplated by the Merger Agreement illegal;
- the holders of a majority of the shares of outstanding Tarveda common stock and preferred stock, voting together as one class and the holders of at least a majority of Tarveda Series 1 Preferred Stock, must have adopted and approved the Merger Agreement and the transactions contemplated by the Merger Agreement, and approved the Merger;
- the holders of a majority of the shares of Organovo common stock having voting power representing a majority of the shares of Organovo common stock must have approved the Organovo Reverse Stock Split and the holders of a majority of the votes cast at the Organovo special meeting must have approved the issuance of Organovo common stock in the Merger in accordance with the terms of the Merger Agreement;
- the existing shares of Organovo common stock must have been continually listed on The Nasdaq Global Market or The Nasdaq Capital Market through the consummation of the Merger, and Organovo must have caused the shares of Organovo common stock to be issued in the Merger to be approved for listing on Nasdaq (subject to official notice of issuance) as of the consummation of the Merger;
- there must not be any legal proceeding pending, or overtly threatened in writing by an official of any governmental body in which such governmental body indicates that it intends to conduct any legal proceeding or take any other action:
  - challenging or seeking to restrain or prohibit the consummation of the Merger or the transactions contemplated by the Merger Agreement;
  - relating to the Merger and related transactions and seeking to obtain from Organovo, Merger Sub or Tarveda any damages or other relief that may be material to Organovo, Merger Sub or Tarveda;
  - seeking to prohibit or limit in any material and adverse respect a party to the Merger Agreement's ability to vote, transfer, receive dividends with respect to or otherwise exercise ownership rights with respect to the common stock of Organovo;
  - that would materially and adversely affect the right or ability of Organovo or Tarveda to own the assets or operate the business of Organovo or Tarveda; or

- seeking to compel Tarveda, Organovo, or any of their respective subsidiaries, to dispose of or hold separate any material assets as a result of the Merger or related transactions.

In addition, each party's obligation to complete the Merger is further subject to the satisfaction or waiver by that party of the following additional conditions:

- all representations and warranties of the other party in the Merger Agreement must be true and correct on the date of the Merger Agreement and on the Closing with the same force and effect as if made on the Closing or, if such representations and warranties address matters as of a particular date, then as of that particular date, except where the failure of these representations and warranties to be true and correct, in each case or in the aggregate, would not reasonably be expected to have a material adverse effect;
- the other party to the Merger Agreement must have performed or complied in all material respects with all covenants and obligations in the Merger Agreement required to be performed or complied with by it on or before the consummation of the Merger;
- the lock-up agreements executed by certain officers, directors and stockholders of Organovo and Tarveda must continue to be in full force and effect as of immediately following the Effective Time; and
- the other party must have delivered certain certificates and other documents required under the Merger Agreement for the consummation of the Merger.

In addition, the obligation of Organovo and Merger Sub to complete the Merger is further subject to the satisfaction or waiver of the following conditions:

- Organovo must have received the opinion of Gunderson Dettmer (or Organovo's Replacement Counsel if applicable), dated as of the Closing, to the effect that, on the basis of the facts, representations and assumptions set forth or referred to in such opinion, the Merger will for U.S. federal income tax purposes qualify as a reorganization within the meaning of Section 368(a) of the Code and Tarveda must have delivered proper notice to the IRS in accordance with Treasury Regulations Section 1.897-2(h)(2);
- Tarveda must have terminated certain agreements entered into between Tarveda and its stockholders;
- Tarveda must have delivered to Organovo written resignations of the officers and directors of Tarveda that are not continuing as officers and directors of Tarveda following the Merger;
- Tarveda must have effected a conversion of each share of Tarveda preferred stock into shares of Tarveda common stock;
- Tarveda must have effected a conversion of all of its outstanding convertible indebtedness into shares of Tarveda common stock and shall have no other outstanding indebtedness other than as disclosed to Organovo;
- Tarveda must have delivered to Organovo a signed statement that Tarveda is not (and has not been for the applicable period specified in Section 897(c)(1)(A)(ii) of the Code) a "United States real property holding corporation" as defined in Section 897(c)(2) of the Code and the applicable Treasury Regulations;
- Tarveda must have delivered a closing financial certificate signed by its Chief Executive Officer certifying the accuracy of Tarveda's balance sheet at the Closing, which must include that Tarveda has no less than $15.0 million of cash and cash equivalents at the date of the merger Agreement; and
- there shall have been no effect, change, event, circumstance or development that is or would reasonably be expected to be materially adverse to the business, condition (financial or otherwise), assets, operations or financial performance of Tarveda and its subsidiaries, taken as a whole, or the

ability of Tarveda to consummate the Merger or any of the other transactions contemplated by the Merger Agreement or to perform any of its covenants or obligations under the Merger Agreement in all material respects, each referred to as a material adverse effect as it relates to Tarveda, that is continuing.

The Merger Agreement provides that certain events shall not be considered a material adverse effect to Tarveda, including without limitation:

- any conditions generally affecting the industries in which Tarveda and its subsidiaries participate or the United States or global economy or capital markets as a whole, to the extent such conditions do not have a materially disproportionate impact on Tarveda and its subsidiaries taken as a whole;
- any failure by Tarveda or any of its subsidiaries to meet internal projections of forecasts or third party revenue or earnings predictions for any period ending on or after the date of the Merger Agreement;
- any effect, change, event, circumstance or development resulting from the execution, delivery, announcement or performance of the obligations under the Merger Agreement or the announcement, pendency or anticipated consummation of the Merger or the transactions contemplated by the Merger Agreement;
- resignation or termination of any director or officer of Tarveda;
- any natural disaster or any acts of terrorism, sabotage, military action or war, whether or not declared, or any escalation or worsening thereof; or
- any change in United States GAAP or any change in applicable laws, rules or regulations after the Closing.

In addition, the obligation of Tarveda to complete the Merger is further subject to the satisfaction or waiver of the following conditions:

- Organovo must have delivered to Tarveda executed severance agreements consistent with Organovo's Severance Plan and written resignations of the officers and directors of Organovo that are not continuing as officers and directors of Organovo following the Merger;
- Organovo must have caused the new board members of Organovo, specified in the Merger Agreement, to be elected;
- Organovo must have terminated Organovo's 401(k) Plan;
- Organovo must have delivered a closing financial certificate signed by its Chief Executive Officer certifying (a) an itemized list of Organovo's consolidated current assets and consolidated current liabilities, (b) the amount of transaction expenses incurred but unpaid by Organovo at the Closing, (c) the amount of Organovo debt at the Closing, and (d) the amount of Organovo net cash at the Closing;
- Tarveda must have received the opinion of Cooley LLP, dated as of the Closing, to the effect that, on the basis of the facts, representations and assumptions set forth or referred to in such opinion, the Merger will for U.S. federal income tax purposes qualify as a reorganization within the meaning of Section 368(a) of the Code;
- Organovo must have effected the dissolution of its subsidiaries; and
- there shall have been no effect, change, event, circumstance or development that is or would reasonably be expected to be materially adverse to the business, condition (financial or otherwise), assets, operations or financial performance of Organovo and its subsidiaries, taken as a whole, or the ability of Organovo to timely consummate the Merger or any of the other transactions contemplated by the Merger Agreement or to perform any of its covenants or obligations under the Merger Agreement in all material respects, each referred to as a material adverse effect as it relates to Organovo, that is continuing.

The Merger Agreement provides that certain events shall not be considered a material adverse effect to Organovo, including without limitation:

- any conditions generally affecting the industries in which Organovo and its subsidiaries participate or the United States or global economy or capital markets as a whole, to the extent such conditions do not have a materially disproportionate impact on Organovo and its subsidiaries taken as a whole;
- any failure by Organovo or any of its subsidiaries to meet internal projections or forecasts or third party revenue or earnings predictions for any period ending on or after the date of the Merger Agreement;
- any effect, change, event, circumstance or development resulting from the execution, delivery, announcement or performance of the obligations under the Merger Agreement or the announcement, pendency or anticipated consummation of the Merger or the transactions contemplated by the Merger Agreement;
- resignation or termination of any director or officer of Organovo;
- any natural disaster or any acts of terrorism, sabotage, military action or war, whether or not declared, or any escalation or worsening thereof; or
- any change in United States GAAP or any change in applicable laws, rules or regulations after the date of the Merger Agreement.

Representations and Warranties

The Merger Agreement contains customary representations and warranties of Organovo and Tarveda for a transaction of this type relating to, among other things:

- corporate organization and power, and similar corporate matters;
- subsidiaries;
- capitalization;
- financial statements and with respect to Organovo, documents filed with the SEC and the accuracy of information contained in those documents;
- the absence of material changes or events;
- title to assets;
- real property and leaseholds;
- intellectual property;
- material contracts to which the parties or their subsidiaries are a party and any violation, default or breach to such contracts;
- liabilities;
- regulatory compliance, permits and restrictions;
- tax matters;
- employee benefit plans;
- labor and employment;
- environmental matters;
- insurance;

- legal proceedings and orders;
- authority to enter into the Merger Agreement and the related agreements;
- votes required for completion of the Merger and approval of the proposals that will come before the Organovo special meeting and that will be the subject of the Tarveda stockholder written consent;
- except as otherwise specifically identified in the Merger Agreement, the fact that the consummation of the Merger would not contravene or require the consent of any third party;
- bank accounts;
- any brokerage or finder's fee or other fee or commission in connection with the Merger;
- privacy matters relating to personally identifiable health information collected by each party;
- with respect to Organovo, the valid issuance in the Merger of the Organovo common stock;
- disclosures to be included in this proxy statement/prospectus/information statement;
- an assertion that no other representations and warranties, except as set forth in the Merger Agreement, are being given to the other party; and
- an acknowledgement that the other party is not providing any other representations or warranties except as set forth in the Merger Agreement.

The representations and warranties are, in many respects, qualified by materiality and knowledge, and will not survive the Merger, but their accuracy forms the basis of one of the conditions to the obligations of Organovo and Tarveda to complete the Merger.

No Solicitation

Each of Organovo and Tarveda agreed that, except as described below, Organovo and Tarveda and any of their respective subsidiaries will not, and each party will use its reasonable best efforts to cause each of its officers, directors, employees, investment bankers, attorneys, accountants, representatives, consultants or other agents retained by it or any of its subsidiaries not to, directly or indirectly:

- solicit, initiate, knowingly encourage, induce or knowingly facilitate the communication, making, submission or announcement of, any "acquisition proposal" or "acquisition inquiry," each as defined below, or take any action that would reasonably be expected to lead to an acquisition proposal or an acquisition inquiry;
- furnish any nonpublic information regarding Organovo, Tarveda or Merger Sub to any person in connection with or in response to an acquisition proposal or acquisition inquiry;
- engage in discussions or negotiations with any person with respect to any acquisition proposal or acquisition inquiry;
- approve, endorse or recommend an acquisition proposal;
- execute or enter into any letter of intent or similar document or any contract contemplating or otherwise relating to an acquisition transaction; or
- grant any waiver or release under any confidentiality, standstill or similar agreement, other than to either Organovo or Tarveda.

An "acquisition inquiry" means an inquiry, indication of interest or request for nonpublic information that would reasonably be expected to lead to an acquisition proposal.

An "acquisition proposal" means any offer or proposal, whether written or oral, contemplating or otherwise relating to any "acquisition transaction," as defined below.

An “acquisition transaction” means the following:

- any merger, consolidation, amalgamation, share exchange, business combination, issuance or acquisition of securities, reorganization, recapitalization, tender offer, exchange offer or similar transaction: in which Organovo, Tarveda or Merger Sub or any of their subsidiaries is a constituent corporation, in which any individual, entity, governmental entity or “group,” as defined under applicable securities laws, directly or indirectly acquires beneficial or record ownership of securities representing more than 15% of the outstanding securities of any class of voting securities of Organovo, Tarveda or Merger Sub or any of their subsidiaries or in which Organovo, Tarveda or Merger Sub or any of their subsidiaries issues securities representing more than 15% of the outstanding securities of any class of voting securities of such party or any of its subsidiaries;
- any sale, lease, exchange, transfer, license, acquisition or disposition of any business or businesses or assets that account for 15% or more of the fair market value of the consolidated assets of Organovo, Tarveda or Merger Sub and their subsidiaries, taken as a whole, other than an asset sale by Organovo of its intellectual property rights, inventory, equipment and related agreements, assets and technology prior to the Closing that is approved by the Organovo board of directors that would not be reasonably likely to result in any continuing obligation or liability or either Organovo or Tarveda on or after the date of the Closing; and
- any liquidation or dissolution of Organovo, Tarveda or Merger Sub.

An acquisition transaction shall not include the issuance of Tarveda capital stock for cash, and all activities, transactions, agreements and filings with any governmental body in connection therewith may be consummated by Tarveda prior to the Closing for aggregate proceeds necessary to allow Tarveda to have no less than $15.0 million of cash and cash equivalents as of the Closing.

However, before obtaining the applicable Organovo or Tarveda stockholder approvals required to consummate the Merger, each party may furnish nonpublic information regarding such party to, and may enter into discussions or negotiations with, any third party in response to a bona fide written acquisition or acquisition proposal made or received after the date of the Merger Agreement, which such party’s board of directors determines in good faith, after consultation with a nationally recognized independent financial advisor, if any, and its outside legal counsel, constitutes or would reasonably be expected to result in a “superior offer,” as defined below, if:

- neither such party nor any representative of such party has breached the non solicitation provisions of the Merger Agreement described above with respect to such acquisition inquiry or acquisition proposal;
- such party’s board of directors concludes in good faith, based on the advice of outside legal counsel, that the failure to take such action would consitute a breach of the fiduciary duties of such board of directors under applicable legal requirements;
- such party gives the other party prior notice of the identity of the third party and of that party’s intention to furnish nonpublic information to, or enter into discussions with, such third party before furnishing any nonpublic information or entering into discussions with such third party;
- such party receives from the third party an executed confidentiality agreement containing provisions at least as favorable to such party as those contained in the confidentiality agreement between Organovo and Tarveda and provides a copy of such executed confidentiality agreement to the other party; and
- at least five business days’ prior to the furnishing of any nonpublic information to a third party, such party furnishes the same nonpublic information to the other party to the extent such nonpublic information has not been previously furnished.

Each party may grant any waiver or release under any confidentiality or similar agreement referenced above for the sole purpose of allowing any third party that has made an acquisition inquiry to privately make a bona

fide written acquisition proposal if neither party has breach the terms described above with respect to such acquisition inquiry or acquisition proposal and the board of directors of such party concludes in good faith based on the advice of outside legal counsel that the failure to grant such waiver or release would constitute a breach of the fiduciary duties of such board of directors under applicable legal requirements.

A "superior offer" means an unsolicited bona fide acquisition proposal (with all references to "more than 15%" or "15% or more" in the definition of acquisition transaction, provided above, being treated as references to 100% for these purposes) made by a third party that the board of directors of Organovo or Tarveda, as applicable, receiving the offer determines in good faith, after consultation with its outside legal counsel and financial advisor, and after taking into account all financial, legal, regulatory and other aspects of such acquisition proposal (including the financing terms and the ability of such third party to finance such acquisition proposal):

- is more favorable from a financial point of view to the stockholders of Organovo or Tarveda, as applicable, than the terms of the Merger Agreement (including any changes to the terms of the Merger Agreement proposed by either party in response to such superior offer pursuant to and in accordance with the terms of the Merger Agreement);
- is not subject to any financing and if a financing is required, such financing is then fully committed to the third party pursuant to customary commitment letters;
- is reasonably capable of being completed on the terms proposed without unreasonable delay; and
- includes termination rights exercisable by Organovo or Tarveda, as applicable, on terms that are not materially less favorable to such party than the terms of the Merger Agreement, all from a third party capable of performing such terms.

The Merger Agreement also provides that each of Organovo or Tarveda, as applicable, will promptly advise the other of the status and terms of, and keep the other party informed in all material respects with respect to, any acquisition proposal or any acquisition inquiry.

Meetings of Stockholders

Unless Organovo's board of directors has effected a change of recommendation and the Merger Agreement is terminated by Organovo in connection with the entry into a definitive agreement for a superior proposal, in each case in accordance with the terms of the Merger Agreement, Organovo is obligated under the Merger Agreement to call, give notice of and hold a special meeting of its stockholders for the purposes of adopting and approving the Organovo Stockholder Proposals. The Organovo special meeting will be held (on a date selected by Organovo in consultation with Tarveda) as promptly as practicable, and in any event not later than 45 days after the Registration Statement, of which this proxy statement/prospectus/information statement is a part, being declared effective by the SEC.

Unless Tarveda's board of directors has effected a change of recommendation and the Merger Agreement is terminated by Tarveda in connection with the entry into a definitive agreement for a superior proposal, in each case in accordance with the terms of the Merger Agreement, Tarveda is obligated under the Merger Agreement to obtain, within ten business days of the effective date of this Registration Statement, the written consent of the Tarveda stockholders for purposes of (i) adopting the Merger Agreement and approving the Merger and all other transactions contemplated thereby, including the conversion of the Tarveda preferred stock into Tarveda common stock as of immediately prior to the Effective Time, (ii) acknowledging that such adoption and approval of the Merger and the conversion of the Tarveda preferred stock into Tarveda common stock given thereby as of immediately prior to the Effective Time is irrevocable and that such stockholder is aware it may have the right to demand appraisal for its shares pursuant to Section 262 of DGCL, and (iii) acknowledging that by its approval of the Merger it is not entitled to appraisal or dissenters' rights with respect to its shares in connection with the Merger and thereby waives any rights to receive payment of the fair value of its capital stock under the DGCL.

Covenants; Conduct of Business Pending the Merger

Tarveda agreed that it will conduct its business in the ordinary course in accordance with past practices and in compliance with all applicable laws, regulations and certain contracts, and to take other agreed-upon actions. Tarveda also agreed that, subject to certain limited exceptions (including actions to be undertaken by Tarveda to raise the required $15.0 million in cash or cash equivalents), without the consent of Organovo, it will not, during the period prior to consummation of the Merger:

- declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of capital stock (other than for shares of Tarveda capital stock issuable as a dividend that have accrued pursuant to Tarveda's certificate of incorporation); or repurchase, redeem or otherwise reacquire any shares of capital stock or other securities (except for shares of Tarveda common stock from terminated employees of Tarveda);
- amend the certificate of incorporation, bylaws or other charter or organizational documents of Tarveda, or effect or be a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction except as related to the transactions contemplated by the Merger Agreement;
- other than as contemplated by the Merger Agreement and the transactions contemplated thereby, sell, issue or grant, or authorize the issuance of (or make any commitments to do any of the foregoing) any capital stock or other security (except for shares of common stock issued upon the valid exercise of options or warrants outstanding on the date of the Merger Agreement); any option, warrant or right to acquire any capital stock or any other security; or any instrument convertible into or exchangeable for any capital stock or other security;
- form any subsidiary or acquire any equity interest or other interest in any other entity;
- other than in the ordinary course of business, lend money to any individual, entity or governmental body; incur or guarantee any indebtedness for borrowed money; issue or sell any debt securities or options, warrants, calls or other rights to acquire any debt securities; guarantee any debt securities of others; or make any capital expenditure or commitment;
- other than in the ordinary course of business, adopt, establish or enter into any employee plan; cause or permit any employee plan to be amended other than as required by law; pay any bonus or make any profit-sharing or similar payment to, or increase the amount of the wages, salary, commissions, fringe benefits or other compensation or remuneration payable to, any of its directors or employees; or increase the severance or change of control benefits offered to any current or new service providers;
- enter into any material transaction outside the ordinary course of business;
- acquire any material asset or sell, lease or otherwise irrevocably dispose of any of its assets or properties, or grant any encumbrance with respect to such assets or properties, except in the ordinary course of business;
- make, change or revoke any material tax election; file any material amendment to any tax return; adopt or change any accounting method in respect of taxes; change any annual tax accounting period; enter into any tax allocation agreement, tax sharing agreement or tax indemnity agreement (other than commercial contracts entered into in the ordinary course of business the principal subject matter of which is not taxes); settle or compromise any claim, notice, audit report or assessment in respect of material taxes; apply for or enter into any ruling from any tax authority with respect to taxes; surrender any right to claim a material tax refund; or consent to any extension or waiver of the statute of limitations period applicable to any material tax claim or assessment;
- enter into, amend or terminate any material contract other than in the ordinary course of business with respect to the business as currently being conducted;
- other than in the ordinary course of business, materially change pricing or royalties or other payments set or charged by Tarveda or any of its subsidiaries to its customers or licensees or materially increase

or agree to materially increase pricing or royalties or other payments set or charged by persons who have licensed intellectual property to Tarveda; or

- agree, resolve or commit to do any of the foregoing.

Organovo agreed that it will conduct its business in the ordinary course consistent with past practices and in compliance with all applicable laws, regulations and certain contracts, and to take other agreed-upon actions. Organovo also agreed that, subject to certain limited exceptions, without the consent of Tarveda, it will not, during the period prior to the consummation of the Merger:

- declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of capital stock; or repurchase, redeem or otherwise reacquire any shares of capital stock or other securities (except for shares of Organovo common stock from terminated employees of Organovo);
- amend the certificate of incorporation, bylaws or other charter or organizational documents of Organovo, or effect or become a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction except as related to the proposed transactions under the Merger Agreement;
- except as related to the proposed transactions under the Merger Agreement, sell, issue or grant, or authorize the issuance of (or make any commitment to do any of the foregoing): any capital stock or other security (except for shares of Organovo common stock issued upon the valid exercise of outstanding Organovo options as of the date of the Merger Agreement or settlement of Organovo RSUs outstanding as of the date of the Merger Agreement or sales of shares of Organovo common stock issued upon vesting and/or settlement of Organovo RSUs outstanding as of the date of the Merger Agreement to cover tax obligations upon such vesting and/or settlement or upon the valid issuance of Organovo warrants outstanding as of the date of the Merger Agreement); any option, warrant or right to acquire any capital stock or any other security; or any instrument convertible into or exchangeable for any capital stock or other security;
- form any subsidiary other than Merger Sub or acquire any equity interest or other interest in any other entity;
- lend money to any individual, entity or governmental body; other than in the ordinary course of business, incur or guarantee any indebtedness for borrowed money; issue or sell any debt securities or options, warrants, calls or other rights to acquire any debt securities; guarantee any debt securities of others; or make any capital expenditure or commitment;
- adopt, establish or enter into any Organovo employee plan; cause or permit any Organovo employee plan to be amended other than as required by law, subject to prior review and approval (with such approval not to be unreasonably withheld, conditioned or delayed) by Tarveda; pay any bonus or make any profit-sharing or similar payment to, or increase the amount of the wages, salary, commissions, fringe benefits or other compensation or remuneration payable to, any of its directors or employees or increase the severance or change of control benefits offered to any current or new service providers;
- other than enter into any material transaction outside the ordinary course of business other than an asset sale by Organovo of its intellectual property rights, inventory, equipment and related agreements, assets and technology prior to the Closing that is approved by the Organovo board of directors that would not be reasonably likely to result in any continuing obligation or liability or either Organovo or Tarveda on or after the date of the Closing;
- acquire any material asset or sell (other than an asset sale by Organovo of its intellectual property rights, inventory, equipment and related agreements, assets and technology prior to the Closing that is approved by the Organovo board of directors and subject to certain notice or consent rights from Tarveda), lease or otherwise irrevocably dispose of any of its assets or properties, or grant any encumbrance with respect to such assets or properties, except in the ordinary course of business;

- make, change or revoke any material tax election; file any material amendment to any tax return; adopt or change any accounting method in respect of taxes; change any annual tax accounting period; enter into any tax allocation agreement, tax sharing agreement or tax indemnity agreement (other than commercial contracts entered into in the ordinary course of business the principal subject matter of which is not taxes); enter into any closing agreement with respect to any tax; settle or compromise any claim, notice, audit report or assessment in respect of material taxes; apply for or enter into any ruling from any tax authority with respect to taxes; surrender any right to claim a material tax refund; or consent to any extension or waiver of the statute of limitations period applicable to any material tax claim or assessment;
- enter into, amend or terminate any material contract other than an asset sale by Organovo of its intellectual property rights, inventory, equipment and related agreements, assets and technology prior to the Closing that is approved by the Organovo board of directors subject to certain notice and consent rights of Tarveda;
- materially change the pricing or royalties or other payments set or charged by Organovo or any of its subsidiaries to its customers or licensees or materially increase or agree to materially increase pricing or royalties or other payments set or charged by persons who have licensed intellectual property to Organovo; or
- agree, resolve or commit to do any of the foregoing.

Regulatory Approvals

Each of Organovo and Tarveda has agreed:

- that each party would use commercially reasonable efforts to file or otherwise submit, as soon as practicable after the date of the Merger Agreement, all applications, notices, reports and other documents reasonably required to be filed by such party with or otherwise submitted by such party to any governmental entity with respect to the Merger and to submit promptly any additional information requested by any such governmental entity; and
- to respond as promptly as is practicable to respond in compliance with any inquiries or requests received from the Federal Trade Commission or the Department of Justice for information or documentation and any inquiries or requests received from any state attorney general, foreign antitrust or competition authority or other governmental entity in connection with antitrust or competition matters.

Other Agreements

Each of Organovo and Tarveda has agreed to use its commercially reasonable efforts to:

- take all actions necessary to consummate the Merger and the transactions contemplated by the Merger Agreement;
- obtain all consents, approvals or waivers reasonably required to be obtained in connection with the transactions contemplated by the Merger Agreement;
- lift any injunction prohibiting, or any other legal bar to, the Merger or the transactions contemplated by the Merger Agreement;
- satisfy the conditions precedent to the consummation of the Merger Agreement; and
- notwithstanding anything to the contrary contained in the Merger Agreement, Organovo nor Tarveda, as applicable, shall not have any obligation:
  - to dispose of or transfer or cause any of its subsidiaries to dispose of or transfer any assets;
  - to discontinue or cause any of its subsidiaries to discontinue offering any product or service;

- to license or otherwise make available, or cause any of its subsidiaries to license or otherwise make available to any person any intellectual property;
- to hold separate or cause any of its subsidiaries to hold separate any assets or operations (either before or after the Closing);
- to make or cause any of its subsidiaries to make any commitment (to any governmental authority or otherwise) regarding its future operations; or
- to contest any legal proceeding or any order relating to the Merger or any of the other transactions contemplated by the Merger Agreement if either Organovo or Tarveda, as applicable, determines in good faith that contesting such legal proceeding or order might not be advisable.

Organovo and Tarveda agree that:

- Organovo, Merger Sub and Tarveda will make all filings and other submissions and give all notices required to be made and given by such party in connection with the Merger and the transactions contemplated by the Merger Agreement;
- neither party will make any public statement concerning the Merger, subject to certain exceptions;
- Organovo will use commercially reasonable efforts to maintain the listing of its common stock on The Nasdaq Capital Market or The Nasdaq Global Market, to obtain approval for listing on The Nasdaq Capital Market of Organovo common stock and to cause the shares of its common stock and shares of common stock issuable upon exercise of the options and warrants and settlement of RSUs held by Organovo securityholders to be approved for listing on The Nasdaq Capital Market;
- for a period of six years after the consummation of the Merger, Organovo will indemnify each of the current and former directors and officers of Organovo and Tarveda to the fullest extent permitted under the DGCL and will maintain directors' and officers' liability insurance for the directors and officers of Organovo and Tarveda; and
- Organovo, Merger Sub and Tarveda shall cooperate reasonably with each other and shall provide such assistance as may be reasonably requested for the purpose of facilitating the performance by each party of its respective obligations under the Merger Agreement and to enable the combined organization to continue to meet its obligations following the Closing.

Termination

The Merger Agreement may be terminated at any time before the completion of the Merger, whether before or after the required stockholder approvals to complete the Merger have been obtained, as set forth below:

- by mutual written consent duly authorized by the board of directors of each of Organovo and Tarveda;
- by either Organovo or Tarveda if the Merger shall not have been consummated by June 13, 2020; *provided*, *however*, that this right to terminate the Merger Agreement will not be available to any party whose action or failure to act has been a principal cause of the failure of the Merger to occur on or before such date and such action or failure to act constitutes a breach of the Merger Agreement, and this right to terminate shall not be available for an additional 60 days upon request of either party in the event that the SEC has not declared effective the Registration Statement, of which this proxy statement/prospectus/information statement is a part, by such date;
- by Organovo or Tarveda if a court of competent jurisdiction or governmental entity has issued a final and nonappealable order, decree or ruling or has taken any other action that permanently restrains, enjoins or otherwise prohibits the Merger or transactions contemplated by the Merger Agreement;
- by Organovo or Tarveda if the Organovo Reverse Stock Split and the issuance of Organovo common stock in the Merger in accordance with the terms of the Merger Agreement are not approved at the

Organovo special meeting by the required vote of the Organovo stockholders, but Organovo may not terminate the Merger Agreement pursuant to this provision if the failure to obtain the approval of Organovo stockholders was caused by the action or failure to act of Organovo and such action or failure to act constitutes a material breach by Organovo of the Merger Agreement;

- by Tarveda, at any time prior to the approval by Organovo's stockholders of the Organovo Stockholder Proposals, if:
  - the Organovo board of directors fails to recommend that the stockholders of Organovo vote to approve the Organovo Stockholder Proposals or withdraws or modifies its recommendation in a manner adverse to Tarveda;
  - Organovo fails to include in this proxy statement/prospectus/information statement such recommendation;
  - the Organovo board of directors fails to publicly reaffirm such recommendations within 10 business days after Tarveda requests in writing;
  - Organovo fails to hold the Organovo special meeting within 45 days after the Registration Statement, of which this proxy statement/prospectus/information statement is a part, is declared effective under the Securities Act, other than to the extent that such Registration Statement is subject to a stop order or proceeding, or threatened proceeding by the SEC, seeking a stop order with respect to such Registration Statement, in which case such 45-day period will be tolled for so long as such stop order remains in effect or proceeding or threatened proceeding remains pending;
  - the Organovo board of directors approves, endorses or recommends any acquisition proposal, as defined in the section titled "*The Merger Agreement — No Solicitation*" in this proxy statement/prospectus/information statement; or
  - Organovo or any director, officer or agent of Organovo breached the non solicitation provisions set forth in the Merger Agreement (each of the above clauses is referred to as an "Organovo triggering event");
- by Organovo, at any time prior to the approval by Organovo's stockholders of the Organovo Stockholder Proposals, if:
  - the Tarveda board of directors fails to recommend that the stockholders of Tarveda vote to approve the Merger or shall for any reason withdraws or modifies its recommendation in a manner adverse to Organovo;
  - the Tarveda board of directors publicly approves, endorses or recommends any acquisition proposal, as defined in the section entitled "*The Merger Agreement – No Solicitation*" in this proxy statement/prospectus/information statement; or
  - Tarveda or any director, officer or agent of Tarveda breaches the no solicitation provisions set forth in the Merger Agreement or (each of the above clauses is referred to as a "Tarveda triggering event");
- by Organovo or Tarveda if the other party has breached any of its representations, warranties, covenants or agreements contained in the Merger Agreement or if any representation or warranty of the other party has become inaccurate, in either case such that certain conditions to the consummation of the Merger would not be satisfied as of time of such breach or inaccuracy, but if such breach or inaccuracy is curable (and provided that at the time of such breach, the other party has not also then breached any of its representations, warranties covenants or agreements under the Merger Agreement such that certain condition to the consummation of the Merger would not be satisfied), then the Merger Agreement will not terminate pursuant to this provision as a result of a particular breach or inaccuracy until the earlier of the expiration of a 30-day period after delivery of written notice of such breach or inaccuracy and the breaching party ceasing to exercise commercially reasonable efforts to cure such breach, if such breach has not been cured;

- by Organovo or Tarveda if Tarveda's stockholders do not approve the Merger and the Merger Agreement within ten business days after the Registration Statement, of which this proxy statement/prospectus/information statement is a part, being declared effective under the Securities Act; provided, however, that such right to terminate the Merger Agreement shall not be available to Tarveda where the failure to obtain the required stockholder vote by Tarveda's stockholders is cause by the action or failure to act of Tarveda, and such action or failure to act shall constitute a material breach by Tarveda of the Merger Agreement;
- by Organovo, at any time prior to the approval by Organovo's stockholders of the Organovo Stockholder Proposals, upon Organovo entering into a definitive agreement that provides for the consummation of a transaction which meets the requirements of the definition of a superior offer (a "permitted alternative agreement"); provided, however, that Organovo shall not enter into any permitted alternative agreement unless:
  - Tarveda shall have received written notice from Organovo of Organovo's intention to enter into such permitted alternative agreement at least five business days in advance, with such notice describing in reasonable detail the reasons for such intention as well as the material terms and conditions of such permitted alternative agreement, including the identity of the counterparty together with a copy of the current draft of such definitive agreement;
  - Organovo shall have complied with its obligations under the no solicitation provisions set forth in the Merger Agreement;
  - If requested by Tarveda, Organovo shall, during such five business day period, negotiate with Tarveda in good faith to make such adjustments to the terms and conditions of the Merger Agreement so that such permitted alternative agreement no longer constitutes a permitted alternative agreement;
  - the Organovo board of directors shall have determined in good faith, after consultation with its outside legal counsel, that (1) the subject transaction constitutes a permitted alternative agreement as defined above and (2) the failure to enter into such permitted alternative agreement would constitute a breach of its fiduciary duties under applicable laws; and
  - Organovo shall concurrently pay a termination fee equal to $2.0 million and the third-party expenses incurred by Tarveda up to $0.5 million; or
- by Tarveda, at any time prior to the approval of the Merger by the stockholders of Tarveda, upon Tarveda's entering into a permitted alternative agreement; provided, however, that Tarveda shall not enter into any permitted alternative agreement unless:
  - Organovo shall have received written notice from Tarveda of Tarveda's intention to enter into such permitted alternative agreement at least five business days in advance, with such notice describing in reasonable detail the reasons for such intention as well as the material terms and conditions of such permitted alternative agreement, including the identity of the counterparty together with a copy of the current draft of such definitive agreement;
  - Tarveda shall have complied with its obligations under the non solicitation provisions set forth in the Merger Agreement;
  - If requested by Organovo, Tarveda shall, during such five business day period, negotiate with Organovo in good faith to make such adjustments to the terms and conditions of the Merger Agreement so that such permitted alternative agreement no longer constitutes a permitted alternative agreement;
  - the Tarveda board of directors shall have determined in good faith, after consultation with its outside legal counsel, that (1) the subject transaction constitutes a permitted alternative agreement as defined above and (2) the failure to enter into such permitted alternative agreement would constitute a breach of its fiduciary duties under applicable laws; and

- Tarveda shall concurrently pay a termination fee equal to $2.0 million and the third-party expenses incurred by Organovo up to $0.5 million.

Termination Fee

Fee Payable by Organovo

Organovo must pay Tarveda a termination fee equal to $1.0 million and the third-party expenses incurred by Tarveda (up to a maximum of $0.3 million) if:

- the Merger Agreement is terminated by Tarveda at any time prior to the approval of the Organovo Stockholder Proposals by the stockholders of Organovo because of an Organovo triggering event, as defined above in the section titled "*The Merger Agreement — Termination*" in this proxy statement/prospectus/information statement;
- the Merger Agreement is terminated by Organovo at any time prior to the approval of the Organovo Stockholder Proposals upon Organovo entering into a permitted alternative agreement and provided Organovo complies with certain obligations set forth in the Merger Agreement regarding such permitted alternative agreement; provided that Organovo must pay Tarveda a termination fee equal to $2.0 million and the third-party expenses incurred by Tarveda (up to a maximum of $0.5 million); or
- (a)(i) if the Merger Agreement is terminated by either Tarveda or Organovo after (x) the Merger and the contemplated transactions pursuant to the Merger Agreement have not been consummated within six months of the date of the Merger Agreement or (y) the Organovo special meeting (including any adjournments and postponements thereof) shall have been held and completed and Organovo's stockholders shall have taken a final vote on the Organovo Stockholder Proposals and such matters shall not have been approved at the Organovo special meeting (or any adjournment or postponement thereof) by the required Organovo stockholder vote, or (ii) the Merger Agreement is terminated by Tarveda because Organovo or Merger Sub breached any of its representations, warranties, covenants or agreements contained in the Merger Agreement or if any representation or warrant of Organovo or Merger Sub has become inaccurate, in either case such that the conditions to the Closing would not be satisfied as of the time of such breach or inaccuracy, subject to a 30-day cure period, (b) an acquisition proposal, as defined above in the section titled "*The Merger Agreement — No Solicitation*," with respect to Organovo was publically announced, disclosed or otherwise communicated to the Organovo board of directors prior to such termination and (c) within 12 months after the date of such termination, Organovo enters into a definitive agreement with respect to any acquisition transaction, as defined above in the section titled "*The Merger Agreement — No Solicitation*," that results or would result in any third party beneficially owning securities of Organovo or Merger Sub representing more than 50% of the voting power of the outstanding securities of Organovo or Merger Sub or owning assets representing more than 50% of the fair market value of the assets of Organovo or Merger Sub or their respective subsidiaries, taken as a whole or consummates such a transaction.

Organovo must reimburse Tarveda for third-party expenses incurred by Tarveda in connection with the Merger Agreement and the transactions contemplated thereby, up to a maximum of $0.3 million, if:

- the Merger Agreement is terminated by either Tarveda or Organovo after the Organovo special meeting (including any adjournments and postponements thereof) shall have been held and completed and Organovo's stockholders shall have taken a final vote on the Organovo Stockholder Proposals and such matters shall not have been approved at the Organovo special meeting (or any adjournment or postponement thereof) by the required Organovo stockholder vote;
- the Merger Agreement is terminated by Tarveda because Organovo or Merger Sub has breached any of its representations, warranties, covenants or agreements contained in the Merger Agreement or if any representation or warranty of Organovo or Merger Sub has become inaccurate, in either case such that certain conditions to the consummation of the Merger would not be satisfied as of time of such breach

or inaccuracy, and the provisions regarding the opportunity to cure such breach or inaccuracy have been complied with; or

- in the event of a failure by Tarveda to consummate the transactions described in the Merger Agreement solely because there is an Organovo material adverse effect, as defined above in the section titled "*The Merger Agreement — Termination*."

Fee Payable by Tarveda

Tarveda must pay Organovo a termination fee equal to $1.0 million and the third-party expenses incurred by Organovo (up to a maximum of $0.3 million) if:

- the Merger Agreement is terminated by Organovo because of a Tarveda triggering event, as defined above in the section titled "*The Merger Agreement — Termination*;"
- the Merger Agreement is terminated by Tarveda at any time prior to Tarveda obtaining written consents of its stockholders sufficient to approve the Merger and adopt the Merger Agreement and related transactions within ten business days after the Registration Statement, of which this proxy statement/prospectus/information statement is a part, being declared effective by the SEC upon Tarveda entering into a permitted alternative agreement and provided Tarveda complies with certain obligations set forth in the Merger Agreement regarding such permitted alternative agreement, provided that in such a case Tarveda must pay Organovo a termination fee equal to $2.0 million and the third-party expenses incurred by Organovo (up to a maximum of $0.5 million); or
- (a)(i) if the Merger Agreement is terminated by either Tarveda or Organovo after (x) the Merger and the contemplated transactions pursuant to the Merger Agreement have not been consummated within six months of the date of the Merger Agreement or (y) Tarveda does not obtain written consents of its stockholders sufficient to approve the Merger and adopt the Merger Agreement and related transactions within ten business days after the Registration Statement, of which this proxy statement/prospectus/information statement is a part, being declared effective by the SEC, or (ii) the Merger Agreement is terminated by Organovo because Tarveda breached any of its representations, warranties, covenants or agreements contained in the Merger Agreement or if any representation or warrant of Tarveda has become inaccurate, in either case such that the conditions to the Closing would not be satisfied as of the time of such breach or inaccuracy, subject to a 30-day cure period, (b) an acquisition proposal, as defined above in the section titled "*The Merger Agreement — No Solicitation*," with respect to Tarveda was publically announced, disclosed or otherwise communicated to Tarveda's board of directors prior to such termination and (c) within 12 months after the date of such termination, Tarveda enters into a definitive agreement with respect to any acquisition transaction, as defined above in the section titled "*The Merger Agreement — No Solicitation*," that results or would result in any third party beneficially owning securities of Tarveda representing more than 50% of the voting power of the outstanding securities of Tarveda or owning assets representing more than 50% of the fair market value of the assets of Tarveda or its respective subsidiaries, taken as a whole or consummates such a transaction.

Tarveda must reimburse Organovo for expenses incurred by Organovo in connection with the Merger Agreement and the transactions contemplated thereby, up to a maximum of $0.3 million, if:

- the Merger Agreement is terminated by Organovo because Tarveda has breached any of its representations, warranties, covenants or agreements contained in the Merger Agreement or if any representation or warranty of Tarveda has become inaccurate, in either case such that certain conditions to the consummation of the Merger would not be satisfied as of time of such breach or inaccuracy, and the provisions regarding the opportunity to cure such breach or inaccuracy have been complied with;
- the Merger Agreement is terminated by either Tarveda or Organovo if Tarveda does not obtain written consents of its stockholders sufficient to approve the Merger and adopt the Merger Agreement and related transactions within ten business days after the Registration Statement, of which this proxy statement/prospectus/information statement is a part, being declared effective by the SEC; or

- in the event of a failure by Organovo to consummate the transactions described in the Merger Agreement solely because there is a Tarveda material adverse effect, as defined above in the section titled "*The Merger Agreement — Termination.*"

Amendment

The Merger Agreement may be amended by the parties at any time, with the approval of their respective boards, except that after the Merger Agreement has been adopted and approved by the stockholders of Organovo, no amendment which by law requires further approval by the stockholders of Organovo shall be made without such further approval.

On January 26, 2020, Organovo, Merger Sub and Tarveda entered into the Amendment to Merger Agreement, which is included in Annex A of this proxy statement/prospectus/information statement.

The Amendment to Merger Agreement amends the definition of Organovo's valuation under the terms of the Merger Agreement to increase Organovo's valuation by $1.5 million for value attributable to Organovo's intellectual property if Organovo does not sell or transfer its intellectual property and remaining assets prior to the closing of the Merger. As described elsewhere in this proxy statement/prospectus/information statement, the Organovo valuation is used to calculate the Exchange Ratio. The Amendment to Merger Agreement also makes technical changes to the Organovo stockholder proposals to be voted on by the Organovo stockholders at the Organovo special meeting.

AGREEMENTS RELATED TO THE MERGER

Support Agreements and Written Consent

Concurrently with the execution of the Merger Agreement, the executive officers and directors and certain other stockholders of Tarveda entered into support agreements with Organovo and Tarveda (the "Tarveda Support Agreements") who in the aggregate own approximately 95% of the outstanding shares of Tarveda common stock on an as-converted to common stock basis. The Tarveda Support Agreements provide, among other things, that the stockholders who are parties to the Tarveda Support Agreements will vote all of the shares held by them in favor of the adoption of the Merger Agreement or any other matter necessary to consummate the transactions contemplated by the Merger Agreement and against any "acquisition proposal," as defined in the Merger Agreement.

Additionally, concurrently with the execution of the Merger Agreement, the executive officers and directors of Organovo entered into support agreements with Organovo and Tarveda (the "Organovo Support Agreements"). The Organovo Support Agreements provide, among other things, that the stockholders who are parties to the Organovo Support Agreements will vote all of the shares held by them in favor of the Organovo Stockholder Proposals or any other matter necessary to consummate the transactions contemplated by the Merger Agreement and against any "acquisition proposal," as defined in the Merger Agreement.

Lock-Up Agreements

Concurrently with the execution of the Merger Agreement, (i) the officers and directors of Organovo and (ii) the officers, directors and certain securityholders of Tarveda, who in the aggregate own approximately 95% of the outstanding shares of Tarveda common stock on an as-converted to common stock basis, entered into lock-up agreements (the "Lock-Up Agreements"), pursuant to which they accepted certain restrictions on transfers of any shares Organovo's common stock for the 180-day period following the Effective Time.The stockholders party to the Lock-Up Agreements are agreed that without the prior written consent of Organovo, such stockholder will not (i) offer, pledge, sell, contract to sell, sell any option, warrant or contract to purchase, purchase any option, warrant or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of Organovo or any securities convertible into or exercisable or exchangeable for Organovo common stock, whether then owned or thereafter acquired, or publicly disclose the intention to make any such offer, sale, pledge, grant, transfer or disposition, (ii) enter into any swap, short sale, hedge or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of Organovo common stock or (iii) make any demanded for or exercise any right with respect to the registration of any Organovo common stock or any security convertible into or exercisable or exchangeable for Organovo common stock.

MATTERS BEING SUBMITTED TO A VOTE OF ORGANOVO STOCKHOLDERS

Organovo Proposal No. 1: Approval of the Issuance of Common Stock in the Merger to the Tarveda Securityholders in Accordance with the Terms of the Merger Agreement.

At the Organovo special meeting, Organovo stockholders will be asked to approve the issuance of shares of Organovo common stock in the Merger to the Tarveda securityholders in accordance with the terms of the Merger Agreement. Immediately following the Merger, it is expected that Tarveda stockholders, warrantholders and optionholders will own approximately 75% of the common stock of Organovo common stock on a fully diluted basis as defined in the Merger Agreement, with existing Organovo stockholders, optionholders and warrantholders holding approximately 25% of the common stock of Organovo common stock on a fully diluted basis (as defined in the Merger Agreement), and based upon whether Organovo's net cash at the closing of the Merger increases or decreases and Organovo's and Tarveda's debt at the closing of the Merger.

Nasdaq Listing Rule 5635(a)(1) requires a company listed on Nasdaq to obtain stockholder approval prior to the issuance of common stock, among other things, in connection with the acquisition of the stock or assets of another company, if the number of shares of common stock to be issued is equal to or in excess of 20% of the number of shares of common stock then outstanding. The potential issuance of the shares of Organovo common stock in the Merger will exceed the 20% threshold under the Nasdaq Listing Rules. Accordingly, in order to ensure compliance with Nasdaq Listing Rule 5635(a)(1), Organovo must obtain the approval of Organovo stockholders for the issuance of these shares in the Merger.

Nasdaq Listing Rule 5635(b) also requires a company listed on Nasdaq to obtain stockholder approval prior to an issuance of securities that will result in a "change of control" of the company. Although Nasdaq has not adopted any rule as to what constitutes a "change of control" for purposes of Rule 5635(b), Nasdaq has previously indicated that the acquisition of, or right to acquire, by a single investor or affiliated investor group, as little as 20% of the common stock (or securities convertible into or exercisable for common stock) or voting power of an issuer could constitute a change of control. Accordingly, in order to ensure compliance with Nasdaq Listing Rule 5635(b), Organovo must obtain the approval of Organovo stockholders for the change in control of Organovo resulting from the issuance of shares to the Tarveda securityholders in the Merger.

The terms of, reasons for and other aspects of the Merger Agreement, the Merger and the issuance of Organovo common stock pursuant to the Merger Agreement are described in detail in the other sections in this proxy statement/prospectus/information statement.

Vote Required

The affirmative vote of a majority of the voting power of the votes cast at the Organovo special meeting, whether present in person or represented by proxy at the Organovo special meeting, is required for approval of Organovo Proposal No. 1.

THE ORGANOVO BOARD OF DIRECTORS RECOMMENDS THAT THE ORGANOVO STOCKHOLDERS VOTE "FOR" ORGANOVO PROPOSAL NO. 1 TO APPROVE THE ISSUANCE OF SHARES OF ORGANOVO COMMON STOCK IN THE MERGER TO THE TARVEDA SECURITYHOLDERS IN ACCORDANCE WITH THE TERMS OF THE MERGER AGREEMENT. PROPOSAL NO. 1 IS CONDITIONED UPON PROPOSAL NO. 2. THEREFORE, THE MERGER CANNOT BE CONSUMMATED WITHOUT THE APPROVAL OF PROPOSAL NOS. 1 AND 2.

Organovo Proposal No. 2: Approval of the Amendment to the Certificate of Incorporation of Organovo Effecting the Organovo Reverse Stock Split.

General

At the Organovo special meeting, Organovo stockholders will be asked to approve an amendment to the Organovo certificate of incorporation effecting the Organovo Reverse Stock Split. Upon the effectiveness of the amendment to the Organovo certificate of incorporation effecting the Organovo Reverse Stock Split (the "Organovo Split Effective Time"), the issued shares of Organovo common stock immediately prior to the Organovo Split Effective Time will be reclassified into a smaller number of shares within a range, as determined by the Organovo board of directors, such that a stockholder of Organovo will own one new share of Organovo common stock for every 20 to 40 (or any number in between) shares of Organovo common stock held by that stockholder immediately prior to the Organovo Split Effective Time, the exact ratio within such range to be determined by the Organovo board of directors prior to the Organovo Split Effective Time and publicly announced by Organovo.

Purpose

The Organovo board of directors approved the proposal approving the amendment to the Organovo certificate of incorporation effecting the Organovo Reverse Stock Split for the following reasons:

- the Organovo board of directors believes effecting the Organovo Reverse Stock Split may be an effective means of avoiding a delisting of Organovo common stock from Nasdaq;
- the Organovo Reverse Stock Split is required in order to make sufficient shares of Organovo common stock available for issuance to Tarveda stockholders pursuant to the Merger Agreement;
- the Organovo board of directors believes an investment in Organovo common stock may not appeal to brokerage firms that are reluctant to recommend lower priced securities to their clients and investors may also be dissuaded from purchasing lower priced stocks because the brokerage commissions, as a percentage of the total transaction, tend to be higher for such stocks; and
- the analysts at many brokerage firms do not monitor the trading activity or otherwise provide coverage of lower priced stocks and the Organovo board of directors believes that most investment funds are reluctant to invest in lower priced stocks.

If the Organovo Reverse Stock Split successfully increases the per share price of Organovo common stock, the Organovo board of directors believes this increase may increase trading volume in Organovo common stock, which could have a positive impact on Organovo's stock price.

If Proposal No. 1 is not approved and the Merger is not effected, the Organovo board of directors may still choose to implement the Organovo Reverse Stock Split in order to maintain its listing on The Nasdaq Capital Market.

Nasdaq Requirements for Listing on Nasdaq

According to Nasdaq rules, an issuer must, in a case such as this, apply for initial inclusion following a transaction whereby the issuer combines with a non-Nasdaq entity, resulting in a change of control of the issuer and potentially allowing the non-Nasdaq entity to obtain a Nasdaq listing. Accordingly, the listing standards of Nasdaq will require Organovo to have, among other things, a $4.00 per share minimum bid price upon the consummation of the Merger and at least three market makers for the Organovo common stock following the Merger. Therefore, the Organovo Reverse Stock Split is necessary in order to consummate the Merger, and Organovo may be required to engage one or more additional market makers for its common stock.

To the extent the Merger is not completed, the principal reason for the Organovo Reverse Stock Split will be the continued listing on The Nasdaq Capital Market by increasing the per share trading price of Organovo

common stock in order to help ensure a share price high enough to continue to satisfy the $1.00 per share minimum bid price requirement, although there can be no assurance that the trading price of Organovo common stock would be maintained at such level or that Organovo will be able to maintain the listing of Organovo common stock on The Nasdaq Capital Market.

One of the effects of the Organovo Reverse Stock Split will be to effectively increase the proportion of authorized shares which are unissued relative to those which are issued. This could result in Organovo's management being able to issue more shares without further stockholder approval. For example, before the Organovo Reverse Stock Split, Organovo's authorized shares of common stock immediately prior to the consummation of the Merger would be approximately 200 million compared to shares issued of approximately 130.5 million. If Organovo effects the Organovo Reverse Stock Split using a 1-for-30 ratio, its authorized shares of common stock immediately prior to the consummation of the Merger would remain unchanged at 200 million compared to shares issued of approximately 4.4 million (without giving effect to the issuance of Organovo common stock in the Merger). Organovo currently has no plans to issue shares, other than in connection with the Merger, and to satisfy obligations under outstanding Organovo warrants, employee stock options and restricted stock unit awards from time to time as these warrants and options are exercised or the restricted stock units vest. The Organovo Reverse Stock Split will not affect the number of authorized shares of Organovo common stock which will continue to be authorized pursuant to the certificate of incorporation of Organovo.

Risks Associated with the Organovo Reverse Stock Split

There are risks associated with the Organovo Reverse Stock Split, including that the Organovo Reverse Stock Split may not result in an increase in the per share price of Organovo common stock.

Organovo cannot predict whether the Organovo Reverse Stock Split will increase the market price for Organovo common stock. The history of similar stock split combinations for companies in like circumstances is varied. There is no assurance that:

- the market price per share of Organovo common stock after the Organovo Reverse Stock Split will rise in proportion to the reduction in the number of shares of Organovo common stock outstanding before the Organovo Reverse Stock Split;
- the Organovo Reverse Stock Split will result in a per share price that will attract brokers and investors who do not trade in lower priced stocks;
- the Organovo Reverse Stock Split will result in a per share price that will increase the ability of Organovo to attract and retain; or
- the market price per share will either exceed or remain in excess of the $1.00 minimum bid price as required by Nasdaq for continued listing, or that Organovo will otherwise meet the requirements of Nasdaq for inclusion for trading on The Nasdaq Capital Market, including the $1.00 minimum bid price and at least three market makers in Organovo's common stock upon the consummation of the Merger.

The market price of the combined organization's common stock will also be based on performance of Organovo and other factors, some of which are unrelated to the number of shares outstanding. If the Organovo Reverse Stock Split is effected and the market price of Organovo common stock declines, the percentage decline as an absolute number and as a percentage of the overall market capitalization may be greater than would occur in the absence of the Organovo Reverse Stock Split. Furthermore, the liquidity of the common stock could be adversely affected by the reduced number of shares that would be outstanding after the Organovo Reverse Stock Split.

Principal Effects of the Organovo Reverse Stock Split

The certificate of amendment to the certificate of incorporation of Organovo effecting the Organovo Reverse Stock Split is set forth in *Annex D* to this proxy statement/prospectus/information statement.

The Organovo Reverse Stock Split will be effected simultaneously for all outstanding shares of Organovo common stock. The Organovo Reverse Stock Split will affect all of the Organovo stockholders uniformly and will not affect any stockholder's percentage ownership interests in Organovo, except to the extent that the Organovo Reverse Stock Split results in any of the Organovo stockholders owning a fractional share. Common stock issued pursuant to the Organovo Reverse Stock Split will remain fully paid and nonassessable. The Organovo Reverse Stock Split does not affect the total proportionate ownership of Organovo following the merger. The Organovo Reverse Stock Split will not affect Organovo continuing to be subject to the periodic reporting requirements of the Exchange Act.

Procedure for Effecting the Organovo Reverse Stock Split and Exchange of Stock Certificates

If the Organovo stockholders approve the amendment to the certificate of incorporation of Organovo effecting the Organovo Reverse Stock Split, and if the Organovo board of directors still believes that the Organovo Reverse Stock Split is in the best interests of Organovo and its stockholders, Organovo will file the amendment to the certificate of incorporation with the Secretary of State of the State of Delaware at such time as the Organovo board of directors has determined to be the appropriate Organovo Split Effective Time and Organovo shall publicly announce the exact ratio determined by the Organovo board of directors. The Organovo board of directors may delay effecting the Organovo Reverse Stock Split without resoliciting stockholder approval. Beginning at the Organovo Split Effective Time, each certificate representing pre-split shares will be deemed for all corporate purposes to evidence ownership of post- Organovo Reverse Stock Split shares.

As soon as practicable after the Organovo Split Effective Time, stockholders will be notified that the Organovo Reverse Stock Split and/or corporate name change have been effected. Organovo expects that the Organovo transfer agent will act as exchange agent for purposes of implementing the exchange of stock certificates. Holders of pre-Organovo Reverse Stock Split shares in certificated form will be asked to surrender to the exchange agent certificates representing pre-Organovo Reverse Stock Split shares in exchange for certificates representing post-split shares in accordance with the procedures to be set forth in a letter of transmittal to be sent by Organovo. No new certificates will be issued to a stockholder holding shares in certificated form until such stockholder has surrendered such stockholder's outstanding certificate(s) together with the properly completed and executed letter of transmittal to the exchange agent. Any pre-Organovo Reverse Stock Split shares submitted for transfer, whether pursuant to a sale or other disposition, or otherwise, will automatically be exchanged for post-Organovo Reverse Stock Split shares. **Stockholders should not destroy any stock certificate(s) and should not submit any certificate(s) unless and until requested to do so.**

Fractional Shares

No fractional shares will be issued in connection with the Organovo Reverse Stock Split. Stockholders of record who otherwise would be entitled to receive fractional shares because they hold a number of pre-Organovo Reverse Stock Split shares not evenly divisible by the number of pre-Organovo Reverse Stock Split shares for which each post-Organovo Reverse Stock Split share is to be reclassified, will be entitled, upon surrender to the exchange agent of certificates representing such shares, to a cash payment in lieu thereof at a price equal to the fraction to which the stockholder would otherwise be entitled multiplied by the closing price of the common stock on The Nasdaq Capital Market on the date immediately preceding the Organovo Split Effective Time. The ownership of a fractional interest will not give the holder thereof any voting, dividend or other rights except to receive payment therefor as described herein.

By approving the amendment to the certificate of incorporation of Organovo effecting the Organovo Reverse Stock Split, stockholders will be approving the combination of 20 to 40 shares of Organovo common stock into one (1) share of Organovo common stock.

Stockholders should be aware that, under the escheat laws of the various jurisdictions where stockholders reside, where Organovo is domiciled, and where the funds will be deposited, sums due for fractional interests that

are not timely claimed after the effective date of the Organovo Reverse Stock Split may be required to be paid to the designated agent for each such jurisdiction, unless correspondence has been received by Organovo or the exchange agent concerning ownership of such funds within the time permitted in such jurisdiction. Thereafter, stockholders otherwise entitled to receive such funds will have to seek to obtain them directly from the state to which they were paid.

Potential Anti-Takeover Effect

Although the increased proportion of unissued authorized shares to issued shares could, under certain circumstances, have an anti-takeover effect, for example, by permitting issuances that would dilute the stock ownership of a person seeking to effect a change in the composition of the Organovo board of directors or contemplating a tender offer or other transaction for the combination of Organovo with another company, the Organovo Reverse Stock Split proposal is not being proposed in response to any effort of which Organovo is aware to accumulate shares of Organovo common stock or obtain control of Organovo, other than in connection with the Merger, nor is it part of a plan by management to recommend a series of similar amendments to the Organovo board of directors and stockholders. Other than the proposals being submitted to the Organovo stockholders for their consideration at the Organovo special meeting, the Organovo board of directors does not currently contemplate recommending the adoption of any other actions that could be construed to affect the ability of third parties to take over or change control of Organovo. For more information, please see the section titled "*Risk Factors — Risks Related to the Proposed Organovo Reverse Stock Split*" in this proxy statement/prospectus/information statement.

Certain Material U.S. Federal Income Tax Consequences of the Organovo Reverse Stock Split

The following is a discussion of certain material U.S. federal income tax consequences of the Organovo Reverse Stock Split to holders of Organovo common stock, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or foreign tax laws are not discussed. This discussion is based on the Code, U.S. Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the IRS each as in effect as of the date of the Merger. These authorities are subject to differing interpretations or change. Any such change, which may or may not be retroactive, could alter the tax consequences to holders of Organovo common stock.

This discussion does not address all U.S. federal income tax consequences relevant to the particular circumstances of an Organovo common stockholder. In addition, it does not address consequences relevant to holders of Organovo common stock that are subject to particular rules, including, without limitation:

- persons who are not U.S. Holders as defined below;
- persons who do not hold their Organovo common stock as a "capital asset" within the meaning of Section 1221 of the Code;
- persons who hold their Organovo common stock in a functional currency other than the U.S. dollar;
- persons who hold Organovo common stock that constitutes "qualified small business stock" under Section 1202 of the Code or as "Section 1244 stock" for purposes of Section 1244 of the Code;
- persons holding Organovo common stock as part of an integrated investment (including a "straddle," pledge against currency risk, "constructive" sale or "conversion" transaction or other integrated or risk reduction transactions) consisting of shares of Organovo common stock and one or more other positions;
- banks, insurance companies, mutual funds, tax-exempt entities, financial institutions, broker-dealers, real estate investment trusts or regulated investment companies;
- partnerships or other entities classified as partnerships or disregarded entities for U.S. federal income tax purposes, S corporations or other pass-through entities (including hybrid entities);

- persons who acquired their Organovo common stock pursuant to the exercise of compensatory options or in other compensatory transactions;
- persons who acquired their Organovo common stock pursuant to the exercise of warrants or conversion rights under convertible instruments;
- persons who acquired their Organovo common stock in a transaction subject to the gain rollover provisions of Section 1045 of the Code; and
- persons who hold their Organovo common stock through individual retirement accounts or other tax-deferred accounts.

This discussion is limited to holders of Organovo common stock that are U.S. Holders. For purposes of this discussion, a "U.S. Holder" is a beneficial owner of Organovo common stock that, for U.S. federal income tax purposes, is or is treated as:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if either (i) a court within the United States is able to exercise primary supervision over the administration of such trust and one or more United States persons (within the meaning of Section 7701(a)(30) of the Code) are authorized or have the authority to control all substantial decisions of such trust, or (ii) the trust was in existence on August 20, 1996 and has a valid election in effect under applicable Treasury Regulations to be treated as a United States person for U.S. federal income tax purposes.

If an entity treated as a partnership for U.S. federal income tax purposes holds Organovo common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. If you are a partnership or a partner of a partnership you should consult your tax advisor regarding the tax consequences to you.

In addition, the following discussion does not address (i) any U.S. federal non-income tax consequences of the Organovo Reverse Stock Split, including estate, gift or other tax consequences, (ii) any state, local or non-U.S. tax law consequences of the reverse stock split, (iii) the Medicare contribution tax on net investment income or the alternative minimum tax, (iv) the tax consequences of transactions effectuated before, after or at the same time as the Organovo Reverse Stock Split (whether or not they are in connection with the reverse stock split), and (v) the tax consequences to holders of options, warrants or similar rights to acquire Organovo common stock. No ruling from the IRS or opinion of counsel has been or will be requested in connection with the Organovo Reverse Stock Split, Organovo stockholders should be aware that the IRS could adopt a position which could be sustained by a court contrary to that set forth in this discussion.

IN LIGHT OF THE FOREGOING AND BECAUSE THE FOLLOWING DISCUSSION IS INTENDED AS A GENERAL SUMMARY ONLY, HOLDERS OF ORGANOVO COMMON STOCK SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE TAX CONSEQUENCES TO THEM OF THE ORGANOVO REVERSE STOCK SPLIT, INCLUDING THE APPLICABLE U.S. FEDERAL, STATE, LOCAL AND NON-U.S. INCOME AND OTHER TAX CONSEQUENCES IN LIGHT OF THEIR PARTICULAR CIRCUMSTANCES.

Tax Consequences of the Organovo Reverse Stock Split

The Organovo Reverse Stock Split should constitute a "recapitalization" for U.S. federal income tax purposes. As a result, a U.S. Holder of Organovo common stock generally should not recognize gain or loss upon

the Organovo Reverse Stock Split, except with respect to cash received in lieu of a fractional share of Organovo common stock, as discussed below. A U.S. Holder's aggregate tax basis in the shares of Organovo common stock received pursuant to the Organovo Reverse Stock Split should equal the aggregate tax basis of the shares of the Organovo common stock surrendered (excluding any portion of such basis that is allocated to any fractional share of Organovo common stock), and such U.S. Holder's holding period in the shares of Organovo common stock received should include the holding period in the shares of Organovo common stock surrendered. Treasury Regulations provide detailed rules for allocating the tax basis and holding period of the shares of Organovo common stock surrendered to the shares of Organovo common stock received in a recapitalization pursuant to the Organovo Reverse Stock Split. U.S. Holders of shares of Organovo common stock acquired on different dates and at different prices should consult their tax advisors regarding the allocation of the tax basis and holding period of such shares.

Cash in Lieu of Fractional Shares

A U.S. Holder of Organovo common stock that receives cash in lieu of a fractional share of Organovo common stock pursuant to the Organovo Reverse Stock Split should recognize capital gain or loss in an amount equal to the difference between the amount of cash received and the U.S. Holder's tax basis in the shares of Organovo common stock surrendered that is allocated to such fractional share of Organovo common stock. Such capital gain or loss should be long-term capital gain or loss if the U.S. Holder's holding period for Organovo common stock surrendered exceeded one year at the effective time of the Organovo Reverse Stock Split.

Information Reporting and Backup Withholding

A U.S. Holder of Organovo common stock may be subject to information reporting and backup withholding on cash paid in lieu of fractional shares in connection with the Organovo Reverse Stock Split. The current backup withholding rate is 24%. Backup withholding will not apply, however, to a holder who (i) furnishes a correct taxpayer identification number and certifies the holder is not subject to backup withholding on IRS Form W-9, (ii) provides a certification of foreign status on an appropriate IRS Form W-8 or successor form or (iii) otherwise established holder is exempt from backup withholding. U.S. Holders of Organovo common stock should consult their tax advisors regarding their qualification for an exemption from backup withholding and the procedures for obtaining such an exemption. If a U.S. Holder does not provide a correct taxpayer identification number on IRS Form W-9 or other proper certification, the stockholder may be subject to penalties imposed by the IRS. Any amounts withheld under the backup withholding rules may be refunded or allowed as a credit against a U.S. Holder of Organovo common stock's federal income tax liability, if any, provided the required information is timely furnished to the IRS. U.S. Holders should consult their tax advisors regarding their qualification for an exemption from backup withholding and the procedures for obtaining such an exemption. In the event a U.S. Holder is subject to backup withholding, such stockholder should see his, her or its tax advisor to determine if he, she or it is entitled to any tax credit, tax refund or other tax benefit as a result of such backup withholding.

Vote Required

The affirmative vote of holders of a majority of the shares of Organovo common stock having voting power outstanding on the record date for the Organovo special meeting is required to approve the amendment to the certificate of incorporation of Organovo effecting the Organovo Reverse Stock Split, at a ratio of one (1) new share for every 20 to 40 shares of outstanding Organovo common stock.

THE ORGANOVO BOARD OF DIRECTORS RECOMMENDS THAT ORGANOVO STOCKHOLDERS VOTE "FOR" ORGANOVO PROPOSAL NO. 2 TO APPROVE AN AMENDMENT TO THE CERTIFICATE OF INCORPORATION OF ORGANOVO EFFECTING THE ORGANOVO REVERSE STOCK SPLIT. PROPOSAL NO. 1 IS CONDITIONED UPON PROPOSAL NO. 2. THEREFORE, THE MERGER CANNOT BE CONSUMMATED WITHOUT THE APPROVAL OF PROPOSAL NOS. 1 AND 2.

Organovo Proposal No. 3: Advisory, Non-Binding Vote on Merger-Related Executive Compensation Arrangements

Section 14A of the Exchange Act, which was enacted as part of the Dodd-Frank Act, requires that Organovo provide stockholders with the opportunity to vote to approve, on a non-binding advisory vote basis, the payment of certain compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger, as disclosed in the section titled "*The Merger — Interests of the Organovo Directors and Executive Officers in the Merger*" in this proxy statement/prospectus/information statement.

Upon the consummation of the Merger, the combined organization expects that each Organovo named executive officer will effectively be terminated without cause for purposes of the Organovo Severance Plan. Therefore, Organovo is asking stockholders to indicate their approval of the compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger and the associated termination of the named executive officers without cause upon the consummation of the Merger. These payments are set forth in the section titled "*The Merger — Interests of the Organovo Directors and Executive Officers in the Merger*" in this proxy statement/prospectus/information statement, and the accompanying footnotes. In general, the employment agreements, equity awards and other arrangements pursuant to which these compensation payments may be made have previously formed a part of Organovo's overall compensation program for its named executive officers and were previously disclosed to stockholders as part of Organovo's annual proxy statements or its other reports filed with the SEC. These historical employment agreements, equity awards and other arrangements were adopted and approved by the Compensation Committee of Organovo's board of directors, which is composed solely of non-management directors, and are believed to be reasonable and in line with marketplace norms.

Accordingly, Organovo is seeking approval of the following resolution at the special meeting:

> "RESOLVED, that the stockholders of Organovo Holdings, Inc. approve, on a nonbinding, advisory basis, the compensation that will or may become payable by Organovo to its named executive officers that is based on or otherwise relates to the merger as disclosed pursuant to Item 402(t) of Regulation S-K in the section titled "*The Merger — Interests of the Organovo Directors and Executive Officers in the Merger*"."

Stockholders of Organovo should note that this proposal is not a condition to completion of the Merger, and as an advisory vote, the result will not be binding on Organovo, its board of directors or the named executive officers. Further, the underlying employment agreements, equity awards and other arrangements are contractual in nature and not, by their terms, subject to stockholder approval. Accordingly, regardless of the outcome of the advisory vote, if the Merger is consummated and Organovo's named executive officers are terminated in connection with the Merger, the named executive officers will be eligible to receive the compensation that is based on or otherwise relates to the Merger in accordance with the terms and conditions applicable to the underlying employment agreements, equity awards and other arrangements Organovo entered into with these named executive officers.

The affirmative vote of a majority of the voting power to the votes cast at the Organovo special meeting, whether present in person or represented by proxy at the Organovo special meeting, is required to approve the non-binding advisory vote on Merger-related executive compensation arrangements.

Vote Required

The affirmative vote of a majority of the voting power of the votes cast at the Organovo special meeting, whether present in person or represented by proxy at the Organovo special meeting is required for approval of Organovo Proposal No. 3.

THE ORGANOVO BOARD OF DIRECTORS RECOMMENDS THAT THE ORGANOVO STOCKHOLDERS VOTE "FOR" ORGANOVO PROPOSAL NO. 3 TO APPROVE, ON A NON-BINDING ADVISORY VOTE BASIS, COMPENSATION THAT WILL OR MAY BECOME PAYABLE BY ORGANOVO TO ITS NAMED EXECUTIVE OFFICERS IN CONNECTION WITH THE MERGER.

Organovo Proposal No. 4: Approval of the Combined Organization 2020 Equity Incentive Plan

The Organovo board of directors has approved, subject to stockholder approval, the 2020 Plan, which will be the successor to Organovo's 2012 Equity Incentive Plan and 2008 Equity Incentive Plan, and the 2011 Tarveda Plan and (collectively, the "Predecessor Plans") which Organovo will assume in the Merger. The Organovo board of directors believes that it will be beneficial from an administrative point of view for the combined organization to have one plan for all future equity grants to employees, non-employee directors and consultants rather than three plans with differing terms. Once the 2020 Plan becomes effective, no further grants will be made under the Predecessor Plans.

The principal provisions of the 2020 Plan are summarized below and the 2020 Plan is attached hereto as *Appendix E*. The following discussion is qualified in its entirety by reference to the 2020 Plan.

Purpose of the 2020 Plan

The Organovo board of directors believes that it will be administratively beneficial going forward for the combined organization to have one plan for all future equity grants rather than three separate plans with differing terms. The Organovo board of directors believes the 2020 Plan, including the maximum number of shares available for awards under the 2020 Plan, is necessary to ensure that the combined organization has adequate capacity to continue to attract, reward and retain employees, non-employee directors and consultants. Assuming the Merger closes, there are currently 44 individuals who would be eligible to participate in the 2020 Plan, of which 11 are directors or executive officers, 25 are non-executive employees, and 8 are consultants.

As of December 31, 2019, there were 10,482,484 shares available for grant of new awards under Organovo's 2012 Equity Incentive Plan and 1,793,632 shares of Tarveda's common stock available for grant of new awards under the 2011 Tarveda Plan. If the 2020 Plan is approved by stockholders, the total number of shares available for awards to employees, non-employee directors, and other key personnel and consultants will not exceed: 125,000,000 shares representing the sum of (A) new shares, (B) the shares reserved and available for issuance pursuant to the grant of new awards under the Predecessor Plans, and (C) the shares subject to outstanding stock options or other awards granted under the Predecessor Plans that on or after the 2020 Plan becomes effective, terminate or expire prior to exercise or settlement; are not issued because the award is settled in cash; are forfeited because of the failure to vest; or are reacquired or withheld (or not issued) to satisfy a tax withholding obligation or the purchase or exercise price, if any, as such shares become available from time to time. Each share number set forth above will be adjusted to give effect to the proposed Organovo Reverse Stock Split, and the number of shares available for issuance and subject to awards under the 2011 Tarveda Plan will be adjusted to reflect the transactions contemplated by the Merger.

2020 Plan. On December 13, 2019, the Organovo board of directors adopted, subject to stockholder approval at the Organovo special meeting, the 2020 Plan. The 2020 Plan will become effective on the date the stockholders approve the 2020 Plan. The 2020 Plan will be the successor to the Predecessor Plans. Once the 2020 Plan becomes effective, no further grants will be made under the Predecessor Plans.

Eligibility; Type of Awards. The 2020 Plan provides for the grant of incentive stock options ("ISOs"), nonstatutory stock options ("NSOs"), stock appreciation rights, restricted stock awards, restricted stock unit awards, performance-based awards, and other awards, or collectively, awards. ISOs may be granted only to employees, including officers, and the employees of the combined organization's affiliates. All other awards may be granted to employees, including officers, non-employee directors and consultants and the employees and consultants of the combined organization's affiliates.

Authorized Shares. The aggregate number of shares of the combined organization's common stock that may be issued pursuant to stock awards under the 2020 Plan will not exceed 125,000,000 shares consisting of (A) new shares, (B) the shares reserved and available for issuance pursuant to the grant of new awards under the Predecessor Plans upon the effectiveness of the 2020 Plan, and (C) the shares subject to stock options or other awards granted

under the Predecessor Plans that on or after the 2020 Plan becomes effective, terminate or expire prior to exercise or settlement; are not issued because the award is settled in cash; are forfeited because of the failure to vest; or are reacquired or withheld (or not issued) to satisfy a tax withholding obligation or the purchase or exercise price, if any, as such shares become available from time to time. Additionally, the number of shares of the combined organization's common stock reserved for issuance under the 2020 Plan will automatically increase on January 1 of each year, beginning on January 1, 2021 and ending on and including January 1, 2030, by 4% of the total number of shares of the combined organization's capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by the combined organization board of directors. The maximum number of shares that may be issued upon the exercise of ISOs under the 2020 Plan is 375,000,000 shares. Each share number set forth above will be adjusted to give effect to the proposed Organovo Reverse Stock Split, and the number of shares available for issuance and subject to awards under the 2011 Tarveda Plan will be adjusted to reflect the transactions contemplated by the Merger.

Shares issued under the 2020 Plan will be authorized but unissued or reacquired shares of the combined organization's common stock. Shares subject to awards granted under the 2020 Plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, will not reduce the number of shares available for issuance under the 2020 Plan. Additionally, shares issued pursuant to awards under the 2020 Plan that the combined organization repurchases or that are forfeited, as well as shares used to pay the exercise price of an award or to satisfy the tax withholding obligations related to an award, will become available for future grant.

Non-Employee Director Limits. The maximum number of shares of the combined organization's common stock subject to stock awards granted during a single fiscal year to any non-employee director with respect to any calendar year that follows the calendar year in which such individual is first appointed or elected to the Organovo board of directors, taken together with any cash fees paid to such non-employee director during the fiscal year, shall not exceed $500,000 in total value and with respect to the calendar year in which a non-employee director is first appointed or elected to the Organovo board of directors, will not exceed $1,000,000 in total value (in each case, calculating the value of any such stock awards based on the grant date fair value of such stock awards for financial reporting purposes and excluding, for this purpose, the value of any dividend equivalent payments paid pursuant to any stock award granted in a previous fiscal year).

Plan Administration. The Organovo board of directors, or a duly authorized committee of the Organovo board of directors, may administer the 2020 Plan. The Organovo board of directors has delegated concurrent authority to administer the 2020 Plan to the Organovo Compensation Committee under the terms of the Compensation Committee's charter. Organovo sometimes refers to the Organovo board of directors, or the applicable committee with the power to administer its equity incentive plans, as the administrator. The administrator may also delegate to one or more of the combined organization's officers the authority to (1) designate employees (other than officers) to receive specified awards, and (2) determine the number of shares subject to such awards.

The administrator has the authority to determine the terms of awards, including recipients, the exercise, purchase or strike price of awards, if any, the number of shares subject to each award, the fair market value of a share of common stock, the vesting schedule applicable to the awards, together with any vesting acceleration, and the form of consideration, if any, payable upon exercise or settlement of the award and the terms of the award agreements for use under the 2020 Plan.

In addition, subject to the terms of the 2020 Plan, the administrator also has the power to modify outstanding awards under the 2020 Plan, including the authority to reprice any outstanding option or stock appreciation right, cancel and re-grant any outstanding option or stock appreciation right in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under GAAP, with the consent of any materially adversely affected participant.

Stock Options. ISOs and NSOs are granted pursuant to stock option agreements adopted by the administrator. The administrator determines the exercise price for a stock option, within the terms and conditions of the 2020 Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of the common stock on the date of grant. Options granted under the 2020 Plan vest at the rate specified by the administrator.

The administrator determines the term of stock options granted under the 2020 Plan, up to a maximum of ten years. Unless the terms of an optionholder's stock option agreement provide otherwise, if an optionholder's service relationship with the combined organization, or any of its affiliates, ceases for any reason other than disability, death or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. The option term may be extended in the event that either an exercise of the option or an immediate sale of shares acquired upon exercise of the option following such a termination of service is prohibited by applicable securities laws or the insider trading policy. If an optionholder's service relationship with the combined organization or any of its affiliates ceases due to disability or death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual for cause. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the administrator and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of common stock previously owned by the optionholder, (4) a net exercise of the option if it is an NSO, and (5) other legal consideration approved by the administrator. Options may not be transferred to third party financial institutions for value. Unless the administrator provides otherwise, options generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. An optionholder may designate a beneficiary, however, who may exercise the option following the optionholder's death.

Restricted Stock Awards. Restricted stock awards are granted pursuant to restricted stock award agreements adopted by the administrator. Restricted stock awards may be granted in consideration for cash, check, bank draft or money order, services rendered to the combined organization or its affiliates, or any other form of legal consideration. Common stock acquired under a restricted stock award may, but need not, be subject to a share repurchase option in the combined organization's favor in accordance with a vesting schedule to be determined by the administrator. A restricted stock award may be transferred only upon such terms and conditions as set by the administrator. Except as otherwise provided in the applicable award agreement, restricted stock awards that have not vested may be forfeited or repurchased by the combined organization upon the participant's cessation of continuous service for any reason.

Restricted Stock Unit Awards. Restricted stock unit awards are granted pursuant to restricted stock unit award agreements adopted by the administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

Stock Appreciation Rights. Stock appreciation rights are granted pursuant to stock appreciation right grant agreements adopted by the administrator. The administrator determines the strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of the common stock on the date of grant. Upon the exercise of a stock appreciation right, the combined organization will pay the participant an amount equal to the product of (1) the excess of the per share fair market value of its common stock on the date

of exercise over the strike price, multiplied by (2) the number of shares of common stock with respect to which the stock appreciation right is exercised. A stock appreciation right granted under the 2020 Plan vests at the rate specified in the stock appreciation right agreement as determined by the administrator.

The administrator determines the term of stock appreciation rights granted under the 2020 Plan, up to a maximum of ten years. Unless the terms of a participant's stock appreciation right agreement provide otherwise, if a participant's service relationship with the combined organization or any of its affiliates ceases for any reason other than cause, disability or death, the participant may generally exercise any vested stock appreciation right for a period of three months following the cessation of service. The stock appreciation right term may be further extended in the event that exercise of the stock appreciation right following such a termination of service is prohibited by applicable securities laws. If a participant's service relationship with the combined organization, or any of its affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a stock appreciation right be exercised beyond the expiration of its term.

*Performance Awards***.** The 2020 Plan permits the grant of performance-based stock and cash awards. The administrator can structure such awards so that the stock or cash will be issued or paid pursuant to such award only following the achievement of certain pre-established performance goals during a designated performance period. Performance awards that are settled in cash or other property are not required to be valued in whole or in part by reference to, or otherwise based on, the common stock.

The performance goals may be based on any measure of performance selected by the administrator. The administrator may establish performance goals on a company-wide basis, with respect to one or more business units, divisions, affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise (i) in the award agreement at the time the award is granted or (ii) in such other document setting forth the performance goals at the time the goals are established, the administrator will appropriately make adjustments in the method of calculating the attainment of the performance goals as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to GAAP; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under GAAP; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of common stock by reason of any stock dividend or split stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock-based compensation and the award of bonuses under the combined organization's bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under GAAP; and (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under GAAP.

Other Awards. The administrator may grant other awards based in whole or in part by reference to the combined organization's common stock. The administrator will set the number of shares under the award and all other terms and conditions of such awards.

Changes to Capital Structure. In the event there is a specified type of change in the combined organization's capital structure, such as a stock split, reverse stock split, or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2020 Plan; (2) the class and maximum number of shares by which the share reserve may increase automatically each year; (3) the class and

maximum number of shares that may be issued upon the exercise of ISOs; and (4) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding awards.

Corporate Transaction. The 2020 Plan provides that in the event of a corporate transaction, as defined in the 2020 Plan, the following provisions will apply to outstanding stock awards, unless otherwise provided in a stock award agreement or any other written agreement between the combined organization and a participant, or unless otherwise expressly provided by the administrator at the time of grant of a stock award.

In the event of a corporate transaction, any stock awards outstanding under the 2020 Plan may be assumed, continued or substituted for by any surviving or acquiring corporation (or its parent company), and any reacquisition or repurchase rights held by the combined organization with respect to the stock award may be assigned to its successor (or the successor's parent company). If the surviving or acquiring corporation (or its parent company) does not assume, continue or substitute for such stock awards, then (i) with respect to any such stock awards that are held by participants whose continuous service has not terminated prior to the effective time of the corporate transaction, or current participants, the vesting (and exercisability, if applicable) of such stock awards will be accelerated in full (or, in the case of performance awards with multiple vesting levels depending on the level of performance, vesting will accelerate at 100% of the target level) to a date prior to the effective time of the corporate transaction (contingent upon the effectiveness of the corporate transaction), and such stock awards will terminate if not exercised (if applicable) at or prior to the effective time of the corporate transaction, and any reacquisition or repurchase rights held by the combined organization with respect to such stock awards will lapse (contingent upon the effectiveness of the corporate transaction), and (ii) any such stock awards that are held by persons other than current participants will terminate if not exercised (if applicable) prior to the effective time of the corporate transaction, except that any reacquisition or repurchase rights held by the combined organization with respect to such stock awards will not terminate and may continue to be exercised notwithstanding the corporate transaction.

In the event a stock award will terminate if not exercised prior to the effective time of a corporate transaction, the plan administrator may provide, in its sole discretion, that the holder of such stock award may not exercise such stock award but instead will receive a payment equal in value to the excess (if any) of (i) the per share amount payable to holders of common stock in connection with the corporate transaction, over (ii) any per share exercise price payable by such holder, if applicable. In addition, any escrow, holdback, earn out or similar provisions in the definitive agreement for the corporate transaction may apply to such payment to the same extent and in the same manner as such provisions apply to the holders of the combined organization's common stock.

Under the 2020 Plan, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of the combined organization's assets, (2) the sale or disposition of more than 50% of the combined organization's outstanding securities, (3) a merger or consolidation where the combined organization does not survive the transaction, or (4) a merger or consolidation where the combined organization does survive the transaction but the shares of its common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

Transferability. A participant may not transfer awards under the 2020 Plan other than by will, the laws of descent and distribution or as otherwise provided under the 2020 Plan.

Plan amendment or termination. The Organovo board of directors has the authority to amend, suspend, or terminate the 2020 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of the stockholders. No ISOs may be granted after the tenth anniversary of the date the Organovo board of directors adopted the 2020 Plan. No awards may be granted under the 2020 Plan while it is suspended or after it is terminated.

Material U.S. Federal Income Tax Treatment of Options and Awards

The following is a summary of the effect of U.S. federal income taxation on the participants in the 2020 Plan and the combined organization. However, it does not purport to be complete and does not describe the state, local or foreign tax considerations or the consequences for any particular individual.

Incentive Stock Options

An ISO results in neither taxable income to the optionee, nor a deduction to the combined organization at the time it is granted or exercised. If the optionee holds the stock received as a result of an exercise of an ISO for at least two years from the date of the grant and one year from the date of exercise, then the gain realized on disposition of the stock is treated as a long-term capital gain. If the shares are disposed of during this period, however (*i.e.*, a "disqualifying disposition"), then the optionee will include the income, as ordinary compensation for the year of the disposition, in an amount equal to the excess, if any, of the fair market value of the shares, upon exercise of the option over the exercise price (or, if less, the excess of the amount realized upon disposition over the exercise price). The excess, if any, of the sale price over the fair market value on the date of exercise will be a short-term capital gain. In such case, the combined organization will be entitled to a deduction, in the year of such a disposition, for the amount includible in the optionee's income as compensation, subject to the limitations of Section 162(m) of the Code ("Section 162(m)"). The optionee's tax basis in the shares acquired upon exercise of an ISO is equal to the option price paid, plus any amount includible in his or her income as a result of a disqualifying disposition.

Non-Qualified Stock Options

A NSO results in no taxable income to the optionee or deduction to the combined organization at the time it is granted. An optionee exercising a NSO will, at that time, realize taxable compensation in the amount of the excess of the then market value of the shares over the exercise price. Subject to the applicable provisions of the Code, including the limitations of Section 162(m), a deduction for federal income tax purposes will be allowable to the combined organization in the year of exercise in an amount equal to the taxable compensation realized by the optionee. The optionee's tax basis in shares received upon exercise is equal to the sum of the exercise price plus the amount includible in his or her income as compensation upon exercise.

Any gain (or loss) upon subsequent disposition of the shares will be a long- or short-term gain (or loss), depending upon the holding period of the shares.

If a NSO is exercised by tendering previously owned shares of the company's common stock in payment of the exercise price, then, instead of the treatment described above, the following will apply: a number of new shares equal to the number of previously owned shares tendered will be considered to have been received in a tax-free exchange; the optionee's basis and holding period for such number of new shares will be equal to the basis and holding period of the previously owned shares exchanged. The optionee will have compensation income equal to the fair market value on the date of exercise of the number of new shares received in excess of such number of exchanged shares; the optionee's basis in such excess shares will be equal to the amount of such compensation income; and the holding period in such shares will begin on the date of exercise.

Stock Appreciation Rights

Generally, the recipient of a stand-alone Stock Appreciation Right ("SAR") will not recognize taxable income at the time the stand-alone SAR is granted.

If the grantee receives the appreciation inherent in the SAR (change in stock price plus dividends from grant date to settlement date) in cash, the cash will be taxed as ordinary income to the employee at the time it is received. If the grantee receives the appreciation inherent in the SAR in stock, the value is converted into stock which is taxable as ordinary income at the fair market value of the stock.

In general, there will be no federal income tax deduction allowed to the combined organization upon the grant or termination of SARs. However, upon the settlement of a SAR, the combined organization will be entitled to a deduction equal to the amount of ordinary income the recipient is required to recognize as a result of the settlement, subject to the limitations of Section 162(m) of the Code.

Restricted Stock Awards / Performance Stock Awards

No income will be recognized at the time of grant by the recipient of a restricted stock award or performance stock award while such award is subject to a substantial risk of forfeiture. Generally, at the time the substantial risk of forfeiture terminates with respect to a stock award, the then fair market value of the stock awarded will constitute ordinary income to the employee. Subject to the applicable limitations of Section 162(m), a deduction for federal income tax purposes will be allowable to the company in an amount equal to the compensation realized by the recipient.

Other Awards

In the case of an award of RSUs, performance awards, dividend equivalents or dividend equivalent units or other stock or cash awards, the recipient will generally recognize ordinary income in an amount equal to any cash received and the fair market value of any shares received on the date of payment or delivery. In that taxable year, the company will receive a federal income tax deduction in an amount equal to the ordinary income which the recipient has recognized, subject to the limitations of Section 162(m) of the Code.

Section 162(m)

The combined organization generally will be entitled to a tax deduction in connection with an award granted under the 2020 Plan (subject to the requirement of reasonableness, the provisions of Section 162(m) and the satisfaction of a tax reporting obligation) in an amount equal to the ordinary income recognized by a participant and at the time the participant recognizes such income (for example, on the exercise of a NSO). Section 162(m) may limit the deductibility of compensation paid to the chief executive officer and to each of the three most highly compensated executive officers other than the chief executive officer and the chief financial officer. Under Section 162(m), the annual compensation paid to any of these specified executives will be deductible by the company only to the extent that it does not exceed $1,000,000 or an exemption from such deduction limitation is applicable and available.

The exemption from Section 162(m)'s deduction limit for performance-based compensation has been repealed, effective for taxable years beginning after December 31, 2017, such that compensation paid to covered executive officers in excess of $1.0 million will not be deductible unless it qualifies for transition relief applicable to certain performance-based compensation arrangements already in place as of November 2, 2017. Accordingly, any awards granted under the 2020 Plan are not eligible to qualify for any exemption from such deduction limitation. The administrator reserves the right to grant awards under the 2020 Plan that result in compensation to the covered officers in excess of the $1.0 million Section 162(m) deduction limitation.

New Plan Benefits

Future benefits under the 2020 Plan are not currently determinable.

Vote Required

The affirmative vote of a majority of the voting power of the votes cast at the Organovo special meeting, whether present in person or represented by proxy at the Organovo special meeting, is required to approve the 2020 Plan. Abstentions will be counted and will have no effect on the proposal. If Proposal No. 1 is not approved, Organovo does not intend to implement the 2020 Plan.

THE ORGANOVO BOARD OF DIRECTORS RECOMMENDS THAT THE ORGANOVO STOCKHOLDERS VOTE "FOR" ORGANOVO PROPOSAL NO. 4 TO APPROVE THE 2020 PLAN.

Organovo Proposal No. 5: Approval of Possible Adjournment of the Special Meeting

If Organovo fails to receive a sufficient number of votes to approve Organovo Proposal Nos. 1, 2, 3 and 4, Organovo may propose to adjourn the Organovo special meeting, for a period of not more than 30 days, for the purpose of soliciting additional proxies to approve Organovo Proposal Nos. 1, 2, 3 and 4. Organovo currently does not intend to propose adjournment at the Organovo special meeting if there are sufficient votes to approve Organovo Proposal Nos. 1, 2, 3 and 4.

Vote Required

The affirmative vote of a majority of the voting power of the votes cast at the Organovo special meeting, whether present in person or represented by proxy at the Organovo special meeting, is required to approve the adjournment of the Organovo special meeting for the purpose of soliciting additional proxies to approve Organovo Proposal Nos. 1, 2, 3 and 4.

THE ORGANOVO BOARD OF DIRECTORS RECOMMENDS THAT THE ORGANOVO STOCKHOLDERS VOTE "FOR" ORGANOVO PROPOSAL NO. 5 TO ADJOURN THE SPECIAL MEETING, IF NECESSARY, TO SOLICIT ADDITIONAL PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR OF ORGANOVO PROPOSAL NOS. 1, 2, 3 OR 4.

ORGANOVO BUSINESS

Overview

Organovo is a biotechnology company that has historically focused on pioneering the development of bioprinted human tissues that emulate human biology and disease. Organovo has been developing its *in vivo* liver tissues to treat end-stage liver disease and a select group of life-threatening, orphan diseases, for which there are limited treatment options other than organ transplantation. Organovo has also explored the development of other potential pipeline *in vivo* tissue constructs in-house and through collaborations with academic and government researchers.

In May 2019, Organovo announced plans to conduct additional preclinical studies necessary to optimize its manufacturing processes and complete additional preclinical studies that would generate consistent scientific data regarding the prolonged functionality and therapeutic benefits of its *in vivo* liver tissues.

In August 2019, after a rigorous assessment of its liver therapeutic tissue program following completion of these additional studies, Organovo concluded that the variability of biological performance and related duration of potential benefits no longer supported an attractive opportunity due to redevelopment challenges and lengthening timelines to compile sufficient data to support an IND filing. As a result, Organovo suspended development of its lead program and all other related in-house pipeline development activities. The Organovo board of directors also engaged a financial advisory firm to explore its available strategic alternatives, including evaluating a range of ways to generate value from its technology platform and intellectual property, its commercial and development capabilities, its listing on Nasdaq, and its remaining financial assets. These strategic alternatives included possible mergers and business combinations, sales of part or all of Organovo's assets, and licensing and partnering arrangements. Organovo implemented various restructuring steps to manage its resources and extend its cash runway, including reducing commercial activities related to its liver tissues, except for sales of primary human cells out of inventory, negotiating an exit from its long-term facility lease, selling various assets, and reducing its workforce. Additionally, in November 2019, Organovo sold certain inventory and equipment and related proprietary information held by Samsara, and as a result of such sale, Samsara ceased its operations. Organovo has retained certain key management, employees and consultants, its core intellectual property, licenses, collaborations with research institutions and universities, and proprietary equipment, and will continue its operations and explore business and strategic options related to its assets and proprietary technology.

After conducting a diligent and extensive process of evaluating strategic alternatives for Organovo and identifying and reviewing potential candidates for a strategic acquisition or other transaction, which included the receipt of more than 27 non-binding indications of interest from interested parties and careful evaluation and consideration of those proposals, and following extensive negotiation with Tarveda, on December 13, 2019, Organovo and Tarveda entered into the Merger Agreement. Pursuant to the Merger Agreement, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, at the effective time of the Merger, Merger Sub, a wholly-owned subsidiary of Organovo, will merge with and into Tarveda, with Tarveda continuing as a wholly owned subsidiary of Organovo and the surviving corporation of the Merger. If the Merger is completed, the business of Organovo will become the business of Tarveda as described on page 195 of this proxy statement/prospectus/information under the caption "*Tarveda Business*."

If the Merger is not completed, Organovo will reconsider its strategic alternatives and may pursue one of the following courses of action, which Organovo currently believes are the most likely alternatives if the Merger with Tarveda is not completed:

- *Pursue another strategic transaction similar to the Merger*. Organovo may resume its process of evaluating other candidate companies interested in pursuing a strategic transaction and, if a candidate is identified, focus its attention on negotiating and completing such strategic transaction with such candidate.

- *Dissolve and liquidate its assets*. If Organovo is unable, or does not believe that it is able, to find a suitable candidate for another strategic transaction, Organovo may dissolve and liquidate its assets. In that event, Organovo would be required to pay all of its debts and contractual obligations and to set aside certain reserves for potential future claims. If Organovo dissolves and liquidates its assets, there can be no assurance as to the amount or timing of available cash that will remain for distribution to Organovo's stockholders after paying Organovo's debts and other obligations and setting aside funds for its reserves.
- *Continue to operate its business.* Organovo could elect to continue to operate its business and pursue licensing or partnering transactions or utilize its intellectual property and platform technology to pursue the redevelopment of its liver tissues or the development of therapeutic tissues currently being studied by its collaborators. Due to the early development stage of Organovo's, and its collaborators', potential therapeutic tissues, any such redevelopment or development efforts would require a significant amount of time and financial resources, and would be subject to all the risk and uncertainties involved in the development of novel, early stage therapeutic products. There is no assurance that Organovo could raise sufficient capital to support these efforts, that its development efforts would be successful or that it could successfully obtain the regulatory approvals required to market any therapeutic product it pursued.

Organovo's Platform Technology

Organovo's 3D human tissue platform is enabled by its proprietary NovoGen Bioprinters® and related technologies for preparing bio-inks and bioprinting multicellular tissues with complex architecture. Organovo's foundational proprietary technology, grounded in over a decade of peer-reviewed scientific publications, derives from research led by Dr. Gabor Forgacs, the former George H. Vineyard Professor of Biological Physics at the University of Missouri-Columbia. Organovo has a broad portfolio of intellectual property rights covering the principles, enabling instrumentation, applications, and methods of cell-based printing, including exclusive licenses to certain patented and patent pending technologies from the University of Missouri-Columbia and Clemson University. Organovo owns more than 100 patents and pending applications worldwide covering specific tissue designs, uses, and methods of manufacture.

The NovoGen Bioprinter® Platform

Organovo's NovoGen Bioprinters® are automated devices that enable the fabrication of 3D living tissues comprised of mammalian cells. A custom graphic user interface ("GUI") facilitates the 3D design and execution of scripts that direct precision movement of multiple dispensing heads to deposit defined cellular building blocks called bio-ink. Bio-ink can be formulated as a 100% cellular composition or as a mixture of cells and other matter (hydrogels, particles). Organovo's NovoGen Bioprinters® can also dispense pure hydrogel formulations provided the physical properties of the hydrogel are compatible with the dispensing parameters. Most typically, hydrogels are deployed to create void spaces within specific locations in a 3D tissue or to aid in the deposition of specific cell types. Organovo is able to employ a wide variety of proprietary cell- and hydrogel-based bio-inks in the fabrication of tissues. Organovo's NovoGen Bioprinters® also serve as important components of our tissue prototyping and manufacturing platform, as they are able to rapidly and precisely fabricate intricate small-scale tissue models for *in vitro* use as well as larger-scale tissues suitable for *in vivo* use.

Organovo's Research Collaborations

Organovo continues to collaborate with several academic institutions by providing them with access to its NovoGen Bioprinters® for research purposes, including: Yale School of Medicine, University of California, San Francisco, Knight Cancer Institute at Oregon Health & Science University, the University of Virginia, and Murdoch Children's Research Institute and the Royal Children's Hospital, Melbourne, Australia. Organovo believes that the use of its bioprinting platform by major research institutions may help to advance the capabilities of the platform and generate new applications for bioprinted tissues including proof-of-concept

exploration of kidney, intestinal and vasculature tissue constructs. In some instances, an academic institution or other third party has provided funding to support the academic collaborator's access to Organovo's technology platform. This funding is typically reflected as collaboration revenues in Organovo's financial statements. Organovo's research collaborations typically involve both itself and the academic partner contributing resources directly to projects, but also involves sponsored research agreements where Organovo funds specific research programs.

Intellectual Property

Organovo relies on a combination of patents, trademarks, trade secrets, confidential know-how, copyrights and a variety of contractual mechanisms such as confidentiality, material transfer, licenses, research collaboration, limited technology access, and invention assignment agreements, to protect its intellectual property. Organovo's intellectual property portfolio for its core technology was initially built through licenses from the University of Missouri-Columbia ("MU") and the Medical University of South Carolina. Organovo subsequently expanded its intellectual property portfolio by filing patent and trademark applications worldwide and negotiating additional licenses and purchases.

Organovo solely owns or holds exclusive licenses to 21 issued U.S. patents and more than 40 issued international patent applications in foreign jurisdictions including Australia, Canada, China, France, Great Brittan, Germany, Hong Kong, Israel, Japan, South Korea, the Netherlands, Russia, Singapore and Switzerland. Organovo solely or jointly owns or holds exclusive licenses to 19 pending U.S. patent applications and more than 80 pending international applications in foreign jurisdictions including Australia, Canada, China, the European Patent Office, Hong Kong, India, Japan, South Korea and New Zealand. These patent families relate to Organovo's bioprinting technology and its engineered tissue products and services, including its various uses in areas of tissue creation, *in vitro* testing, utilization in drug discovery, and *in vivo* therapeutics.

In-Licensed IP

In 2009 and 2010, Organovo obtained world-wide exclusive licenses to intellectual property owned by MU and the Medical University of South Carolina, which included 6 issued U.S. patents, 2 pending U.S. applications, 16 issued international patents and one pending international application. Dr. Gabor Forgacs, one of Organovo's founders and a former George H. Vineyard Professor of Biophysics at MU, was one of the co-inventors of all of these works (collectively, the "Forgacs Intellectual Property"). The Forgacs Intellectual Property provides Organovo with intellectual property rights relating to cellular aggregates, the use of cellular aggregates to create engineered tissues, and the use of cellular aggregates to create engineered tissue with no scaffold present. The intellectual property rights derived from the Forgacs Intellectual Property enabled Organovo to utilize its NovoGen MMX Bioprinter® to create engineered tissues.

In 2011, Organovo obtained an exclusive license to a U.S. patent (U.S. Pat. No. 7,051,654) owned by the Clemson University Research Foundation that provides Organovo with intellectual property rights relating to methods of using ink-jet printer technology to dispense cells and relating to the creation of matrices of bioprinted cells on gel materials.

In 2015, Organovo obtained world-wide exclusive licenses to intellectual property owned by The University of Queensland (collectively, "UniQuest Intellectual Property") relating to technologies for producing kidney cells and kidney organoids from induced pluripotent stem cells ("iPSCs"). At the time, Professor Melissa Little and her team at The University of Queensland developed a method of growing kidney tissue from iPSCs for potential use in drug screening, disease modeling and cell therapy. Professor Little's research was eventually published in 2015 in the prestigious scientific journal *Nature*. The UniQuest Intellectual Property included 2 pending U.S. patent applications, 2 issued international patents and 15 pending international patent applications.

The patent rights Organovo obtained through these exclusive licenses were not only foundational within the field of 3D bioprinting but provided Organovo with favorable priority dates. Organovo was required to make

ongoing royalty payments under these exclusive licenses based on net sales of products and services that rely on the intellectual property Organovo in-licensed. For additional information regarding Organovo's royalty obligations see "Note 7. Licensing Agreements and Research Contracts" in the Notes to Consolidated Financial Statements incorporated by reference in this proxy statement/prospectus/information statement.

Organovo Owned IP

In addition to the IP Organovo in-licensed, Organovo has historically innovated and grown its IP portfolio.

With respect to Organovo's bioprinting platform, it has 6 issued U.S. patents and 10 issued foreign patents directed to its NovoGen MMX Bioprinter® and methods of bioprinting: U.S. Patent Nos. 8,931,880; 9,149,952; 9,227,339; 9,499,779; 9,855,369; and 10,174,276; Australia Patent Nos. 2011318437, 2015202836, 2016253591, and 2013249569; China Patent Nos. ZL201180050831.4 and ZL201480054148.1; Hong Kong Patent No. HK1187024; Israel Patent No. 225392; Japan Patent No. 6333231; Russia Patent No. 2,560,393. Organovo has additional U.S. continuation applications pending in these families as well foreign counterpart applications in multiple countries.

Organovo's ExVive™ Human Liver Tissue is protected by U.S. Patent Nos. 9,222,932, 9,442,105 and 10,400,219; Singapore Patent No. 11201507202Y; Israel Patent No. 241055; Australia Patent No. 2014236780; Canada Patent No. 2,903,844; Russia Patent No. 2625016; and China Patent No. 201480028365.3. Organovo's ExVive™ Human Kidney Tissue is protected by U.S. Patent Nos. 9,481,868 and 10,094,821. Organovo has additional U.S. patent applications pending in these families, as well as foreign counterpart applications in multiple countries. Organovo currently has pending numerous patent applications in the U.S. and globally that are directed to additional tissue types, their methods of fabrication, and specific applications.

Additionally, in 2013, Organovo purchased the exclusive rights to "Perfusion Bioreactors for Culturing Cells" (U.S. Patent No. 7,767,446, Japan Patent No. 4,914,835, and Australia Patent No. 2,005,287,162) from Becton Dickinson and Company. This patent represents the acquisition of bioreactor technology for the support of Organovo's 3D tissues for use in drug discovery and development.

Employees

As of December 31, 2019, Organovo had 6 employees, all of whom were full-time. Organovo has also retained 10 of its former employees as consultants.

Corporate Information

Organovo's principal executive offices are located at 440 Stevens Avenue, Suite 200, Solana Beach, California 92075 and its phone number is (858) 224-1000. Organovo's Internet address is http://www.organovo.com. The information found on Organovo's Internet website is not part of this proxy statement/prospectus/information statement.

Available Information

Organovo's investor relations website is located at http://ir.organovo.com. Organovo is subject to the reporting requirements of the Exchange Act. Reports filed with the SEC pursuant to the Exchange Act, including Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, are available free of charge, through Organovo's website. The content of Organovo's website is not intended to be incorporated by reference into this proxy statement/prospectus/information statement or in any other report or document that Organovo files. The SEC maintains an internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at www.sec.gov.

TARVEDA BUSINESS

Overview

Tarveda Therapeutics, Inc. ("Tarveda") is a clinical stage biopharmaceutical company developing a new class of potent and selective precision oncology medicines, which it refers to as *Pentarin* miniature drug conjugates, for the treatment of patients with various solid tumor malignancies. *Pentarin* miniature drug conjugates consist of three parts: a tumor targeting component called a targeting moiety, which is typically a small molecule or peptide that binds to a target that is differentiated in tumor compared to normal tissue; a potent anti-cancer payload that can kill tumor cells; and an optimized linker that joins the targeting agent and the anti-cancer payload together. Tarveda designs and develops its *Pentarin* miniature drug conjugates to penetrate solid tumors, selectively bind to the desired tumor targets, and accumulate the anti-cancer payloads directly in tumor cells. Once accumulated in the tumor, the linker begins to breakdown from the anti-cancer payload, or cleave, releasing the payload causing it to become active in the tumor and lead to cancer cell death. Tarveda's *Pentarin* miniature drug conjugates are specifically engineered through chemistry to achieve focused accumulation of the anti-cancer payload in the tumor for extended periods of time while simultaneously limiting exposure to surrounding healthy tissue thereby minimizing toxicity.

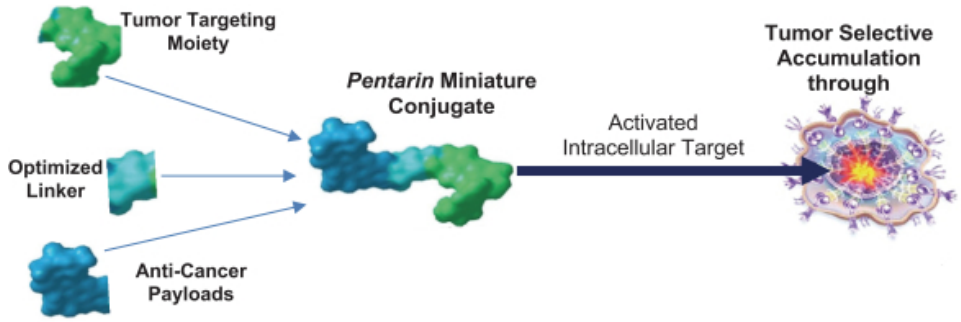
Tarveda currently has two *Pentarin* miniature drug conjugates in clinical trials. Its first clinical program, PEN-866, is its initial candidate from its Heat Shock Protein 90 ("HSP90") binding miniature drug conjugate platform, which it in-licensed from Madrigal Pharmaceuticals, Inc. HSP90 is a molecular chaperone that is highly activated in the harsh tumor environment across a wide range of solid tumor cancers, but which remains relatively dormant in normal tissue. PEN-866 is currently completing its Phase 1 dose escalation stage in an "all comers" trial in various types of solid tumors and is anticipating conclusion of this Phase 1 dose escalation and safety study in the first quarter of 2020. Tarveda's second clinical program, PEN-221, is a *Pentarin* miniature drug conjugate currently in clinical evaluation for the treatment of patients with cancerous tumors expressing somatostatin receptor 2 ("SSTR2") on the cell surface such as gastrointestinal neuroendocrine tumors ("GI NET"), small cell lung cancer and other neuroendocrine tumors. PEN-221 is a proprietary asset discovered in-house and is currently progressing through its Phase 2a trial. Tarveda has completed enrollment for its initial GI NET cohort in the Phase 2a trial with an expected data readout in the second half of calendar year 2020.

Tarveda has a robust intellectual property estate that has its foundations in the protection of its miniature drug conjugate platform and technologies and patents related to the medicines that are in clinical trials and in development. Tarveda is led by a management team with extensive, relevant experience in leading successful public companies and in discovering, developing and commercializing first in class therapeutics and oncology products at leading life science companies such as GlaxoSmithKline plc, Eli Lilly and Company, Merck & Co., Inc., Johnson & Johnson, Clinical Data, Inc. (now part of Abbvie Inc.), and Insulet Corporation. Tarveda has assembled a board of directors and scientific advisory board of industry leaders and seasoned investors who have significant and complimentary experience in various therapeutic fields, including oncology. Tarveda is supported by key healthcare investors including Novo Holdings A/S and funds managed by Versant Ventures and ND Capital, formerly known as NanoDimension Ventures.

Tarveda's *Pentarin* Miniature Drug Conjugate Platform

Tarveda's *Pentarin* miniature drug conjugate platform allows for the development of precision oncology medicines that can bind to targets on the surface of cancer cells as well as cross the membrane of cancer cells and bind to activated targets that reside inside the malignant cells. Tarveda's *Pentarin* miniature drug conjugates are designed to take the best properties of both small molecule drugs and antibody drug conjugates ("ADCs") to form a miniature drug conjugate able to penetrate into solid tumors, accumulate and retain anti-cancer payloads, which become active in tumor cells. Small molecules are miniature in size (< 1 kilodalton or kD) and have half-lives in plasma that typically range from minutes to hours. They readily penetrate into tumors but tend to diffuse equally to normal tissues and cause toxicity as a result. ADCs, which leverage a tumor targeting moiety,

optimized linker and an anti-cancer payload are the opposite of small molecules in that they are much larger (approximately 150 kD) and have half-lives in plasma that may allow the ADCs to remain in plasma for days, weeks or longer. However, due to their large size, they are less able to penetrate into solid tumors. Additionally, their long periods of time in circulation may result in increased normal tissue toxicity. Tarveda's *Pentarin* miniature drug conjugates remain small (< 2 kD) and have an average half-life in plasma of several hours. This molecular profile allows the *Pentarin* miniature drug conjugates to cross the cell membrane of normal and cancerous cells, bind, accumulate and retain the anti-cancer payload in the tumor target while additional intact conjugate clears the plasma within hours, reducing toxicity to normal tissues. The following figure demonstrates the components of a *Pentarin*:



Tarveda's *Pentarin* miniature conjugates are developed through chemistry and consist of three components: a tumor targeting moiety, an optimized linker and an anti-cancer payload:

- *Tumor targeting moiety*: A small molecule or peptide that binds to a target expressed differentially in a tumor environment as compared to normal tissue. The target moiety may bind both on the surface of the cell and/or to an intra-cellular target.
- *Optimized linker:* A designed chemical component that connects the targeting moiety to a payload. Linkers are typically designed to cleave at certain rates allowing for various levels of payload release in tumor.
- *Anti-cancer payload:* Anti-cancer payloads consist of various agents such as kinase inhibitors, chemotherapies, radioisotopes and other payloads that lead to potential cancer cell death. These anti-cancer payloads are often too toxic to be administered as standalone agents.

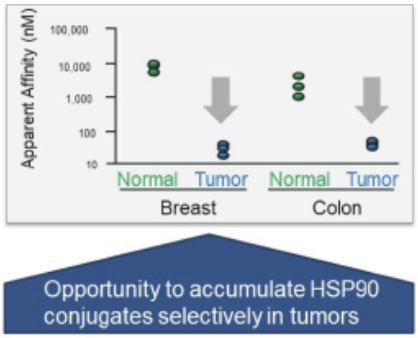
Heat Shock Protein 90 Binding Miniature Drug Conjugate Platform

Within the *Pentarin* miniature drug conjugate platform, Tarveda has in-licensed technology that it is using to develop proprietary HSP90 binding miniature drug conjugates, such as PEN-866. If successful, Tarveda believes that its technology and knowhow will allow it to bring additional *Pentarin* miniature drug conjugate candidates to the clinic providing for additional registrational and partnership opportunities. Tarveda refers to this prong of its broader *Pentarin* platform as its HSP90 binding miniature drug conjugate platform. Tarveda's HSP90 binding miniature drug conjugates are designed to attempt to kill tumor cells by accumulating and retaining anti-cancer payloads that are cleaved from its small molecule targeting moiety that has high affinity for the activated and overexpressed form of HSP90 in a range of solid tumors. The binding moieties of its HSP90 binding miniature drug conjugates have been shown to bind with much higher affinity to the activated form of HSP90, which is activated in the harsh environment of the tumor as compared to lower affinity for HSP90 in normal cells, which generally remains inactive.

The following figure (left) from a published study demonstrates that an HSP90 binding molecule has a much higher affinity for the active form of HSP90 in tumor as compared to normal tissue. The following figure

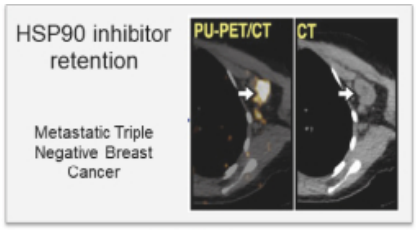
(right) shows data from a study published by the Memorial Sloan Kettering Cancer Center showing the accumulation of an HSP90 small molecule imaging agent in a breast tumor in a patient:

HSP90 Small Molecule Inhibitor Has Affinity in Tumor vs Normal Tissue [1]



Opportunity to accumulate HSP90 conjugates selectively in tumors

The Majority Of Patient Tumors Retain[124] I-labeled HSP90 Inhibitor PU-H71[2]



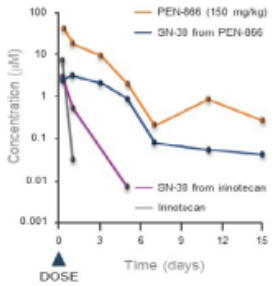
Opportunity for sustained release of payloads in tumor to drive efficacy

(1) Kamal. A et al (2003) Nature 425, 407-410
(2) Rodina et al (2016) Nature 538, 397-401

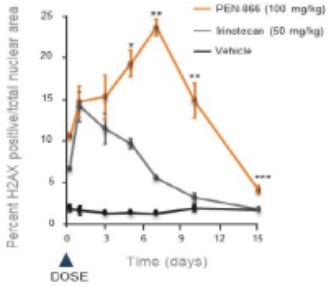
The anti-cancer payload, which is accumulated and retained in tumor remains masked while the HSP90 binding miniature drug conjugate is intact but activates as the payload is cleaved from the targeting moiety. This masking approach allows for reduced normal tissue toxicity and the payload to become active upon being cleaved in the tumor cells over time. Unlike historical targeting of activated HSP90 in solid tumors by small molecules designed to inhibit the target, *Pentarin* HSP90 binding drug conjugates are not designed to inhibit HSP90 but rather exploit elevated activity and expression of HSP90 in solid tumors as a target for the selective binding and accumulation of anti-cancer payloads.

The following figure illustrates the targeting and retention effects of PEN-866 in tumor-bearing mice. The left-hand panel shows the high levels of PEN-866 that are achieved in the tumors and the long retention of the drug over the two weeks of the experiment. SN-38 is slowly cleaved from PEN-866 and has a sustained exposure in the tumor. This contrasts with the non-targeted prodrug of SN-38, irinotecan. Irinotecan has a short exposure within the tumors as it is not actively retained unlike PEN-866. The SN-38 that is released from irinotecan consequently also has a short duration in the tumor. The middle panel shows the DNA damage that results from active SN-38 released in the tumor. The SN-38 that is released from PEN-866 at a high sustained level results in a significantly greater degree of DNA damage (p-values < 0.05, which indicates statistical significance) as compared to results from the shorter exposure of SN-38 when irinotecan is dosed. The right-hand panel shows the effect of the drugs on tumor growth. PEN-866 shows a very significant reduction of tumor growth after just three doses (p-values <0.05, which indicates statistical significance), each separated by a week, compared to the limited effect of irinotecan dosed at its maximum tolerated dose after the same schedule of dosing.

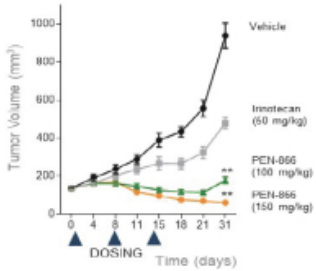
Sustained Tumor Tissue Retention



Enhanced And Prolonged Tumor DNA Damage



Tumor Impact Compared to Control



PEN-886 versus irinotecan: * p = 0.0013, ** p < 0.001, *** p = 0.002

As part of the initial Phase 1 study for PEN-866, Tarveda was able to collect tumor biopsies from two patients undergoing treatment with PEN-866. The first biopsy was taken one day after the patient was dosed and demonstrates that the intact *Pentarin* accumulates in the tumor and begins to slowly cleave its payload. The cleavage of the payload allows the SN-38 topoisomerase 1 inhibitor to unmask and become active in the tumor. As shown in the figure below left, at one day post dosing, PEN-866 had accumulated and was retained in tumor with approximately 27% of the amount accumulated in tumor cleaving to release the anti-cancer payload, SN-38. At the same time, the amount of intact conjugate in the plasma is at a reduced level compared to the amount accumulated in tumor and the amount of free SN-38 in plasma is at a minimal level demonstrating that as the *Pentarin* clears the plasma, the anti-cancer payload remains masked, likely limiting normal tissue toxicity.

A second biopsy taken six days after a PEN-866 dose demonstrated that measurable concentrations of the *Pentarin*, PEN-866, and the released SN-38 payload remain in tumor while there are minimal measurable amounts of the drug in the plasma and no measurable amounts of SN-38 (plasma was sampled one day after tumor biopsy). For PEN-866, these time points, at six and seven days, respectively, are important as the patient would typically receive a new dose of the drug seven days after the prior dose. The following chart demonstrates the levels measured:

Tumor and Plasma Levels One Day After Prior Dose

	Amount in Tumor (nM)	Amount in Plasma (nM)
PEN-866	318	94.7
SN-38	86.6	2.43

Tumor Biopsy Six Days and Plasma Levels Seven Days After Prior Dose

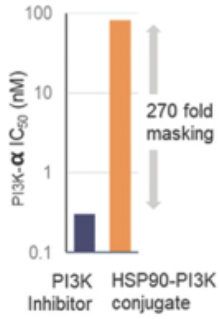
	Amount in Tumor (nM)	Amount in Plasma (nM)
PEN-866	31	0.27
SN-38	2	BLQ*

* Below limit of quantitation of 0.25 nM

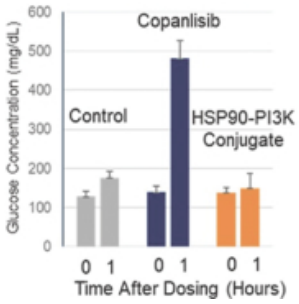
Tarveda believes its HSP90 binding miniature drug conjugate platform represents an opportunity to bring additional candidates beyond PEN-866 into clinical trials in coming years. The construct of its HSP90 binding miniature drug conjugates allows for other high value, anti-cancer payloads and optimized linkers to be attached to its targeting moieties, resulting in the ability to selectively accumulate and retain a range of anti-cancer payloads in the tumor while limiting normal tissue toxicity. Tarveda believes that its platform and knowhow also allow it to mask these various potent anti-cancer payloads until such time that the payload is cleaved from the binding moiety and activated in the tumor. This masking approach allows for reduced normal tissue toxicity and for the payload to become active upon being cleaved in the tumor cells.

The following figure illustrates the benefit of payload masking in *in-vivo* pre-clinical experiments in a new HSP90 binding miniature drug conjugate. In this example, a conjugate has been created that carries a pan-PI3K inhibitor as the payload. Pan-PI3K inhibitors typically cause hyperglycemia as a significant toxicity in animals and humans. The payload is a potent inhibitor of the alpha isoform of PI3K (PI3Kα), but the conjugate has been designed to mask the PI3Kα such that, while the conjugate is intact, it appears as a much weaker inhibitor of PI3Kα, with 270-fold less activity against the enzyme (left panel). It is only when the conjugate linker is cleaved and the potent payload is released that the potent PI3Kα activity is observed. The result of the masking of the PI3Kα payload is that Tarveda's miniature drug conjugate does not show the characteristic spikes in glucose that are seen when pan-PI3K inhibitors are dosed (center panel). While masking the hyperglycemia toxicity of the PI3Kα inhibitor, the miniature drug conjugate targets the active payload to the tumor and demonstrates tumor growth inhibition in a mouse xenograft model as compared to the FDA approved PI3K inhibitor, the anti-cancer payload known as copanlisib alone (right panel).

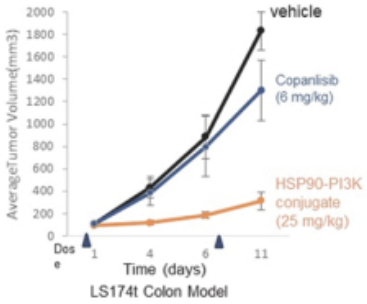
HSP90 Conjugate Masks PI3K Inhibition In An Enzyme Assay



HSP90 Conjugate Reduces PI3K Induced Hyperglycemia

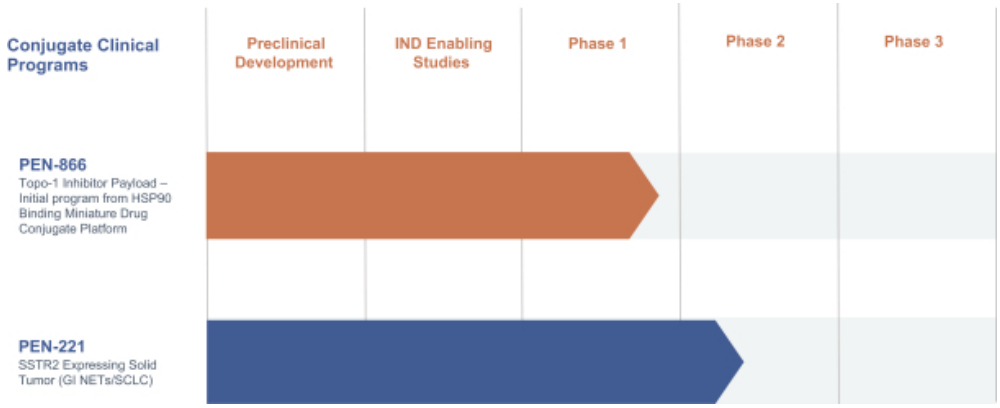


HSP90-PI3K Conjugate Compared To PI3K Inhibitor Alone



Tarveda's Product Pipeline

The following table summarizes Tarveda's current clinical pipeline:



HSP90 binding miniature drug conjugate platform — preclinical programs

In addition to PEN-866 Tarveda is developing additional miniature drug conjugates on its HSP90 binding miniature drug conjugate platform to target other promising anti-cancer payloads to solid tumors. Current programs in pre-clinical discovery include the development of *Pentarin* miniature drug conjugates using the HSP90 binding miniature drug conjugate platform technology to deliver kinase inhibitors, radioisotopes, and other anti-cancer payloads to accumulate and release these payloads in solid tumors.

In addition to kinase inhibitors and radioisotopes, Tarveda also expects to explore the ability to use its HSP90 binding miniature drug conjugate platform to develop additional *Pentarin* miniature drug conjugates with a broad range of anti-cancer payloads.

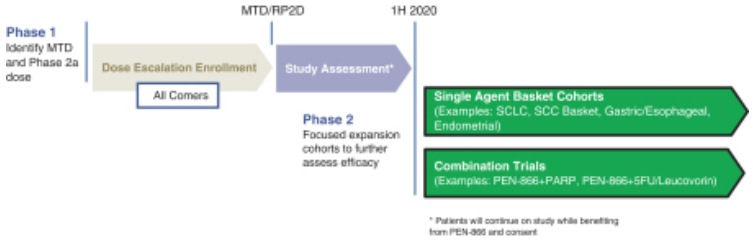
PEN-866 — first clinical program from the Heat Shock Protein 90 binding miniature drug conjugate platform

Tarveda's lead drug candidate from its HSP90 binding miniature drug conjugate platform is PEN-866, which selectively binds in tumors to the activated form of HSP90, accumulates and releases its SN-38 payload, a potent topoisomerase 1 inhibitor. PEN-866 is currently in the final stage of the dose-escalation and safety Phase 1 of a Phase 1/2a trial. This study assesses safety, tolerability and pharmacokinetics ("PK") of PEN-866. Patients with progressive, advanced solid malignancies are being enrolled in escalating cohorts of two to six patients. The primary objectives are to determine the maximum tolerated dose and safety profile of PEN-866, which is given weekly three out of four weeks in a 28-day course. Clinical activity will be assessed using *Response Evaluation Criteria in Solid Tumors* ("RECIST 1.1"), which was released in 2009 and is based upon original criteria developed by the World Health Organization.

The maximum tolerated dose of PEN-866 was achieved in the third quarter of 2019 at 175 mg / m^2. Tarveda is currently treating patients in a dose confirmation cohort that will be used to set the most appropriate dosage for patients in the Phase 2a portion of the clinical study. Although safety and tolerability are the primary objectives of the PEN-866 Phase 1 study, Tarveda did observe early signs of clinical activity in a heavily pre-treated patient population. These early signs of clinical benefit included a confirmed partial response as defined in RECIST 1.1, and prolonged progression-free survival across several patients with various solid tumor types.

Given this encouraging early Phase 1 data, Tarveda plans to begin its Phase 2a trial exploring various solid tumors in separate cohorts to evaluate the clinical benefits of treating patients with PEN-866 in the first quarter of

2020, with data readouts likely commencing in late 2020 and extending through 2021. The planned Phase 2a development program will evaluate PEN-866 both as a single agent as well as in combination with other targeted drugs and traditional cytotoxic small molecules. Single agent, Phase 2a trials will be conducted to measure the response rate and the duration of response likely including but not limited to the following types of cancer; genital-anal carcinoma, small cell lung cancer, endometrial cancer, gastric cancer, and esophageal cancer. Additionally, PEN-866 will potentially be studied in combination with PARP inhibitors in small cell lung cancer, cytotoxic chemotherapy in pancreatic cancer, and cytotoxic chemotherapy in Ewing's sarcoma and rhabdomyosarcoma. The endpoints for these combination trials will include; safety, response rate, progression-free survival, and overall survival.



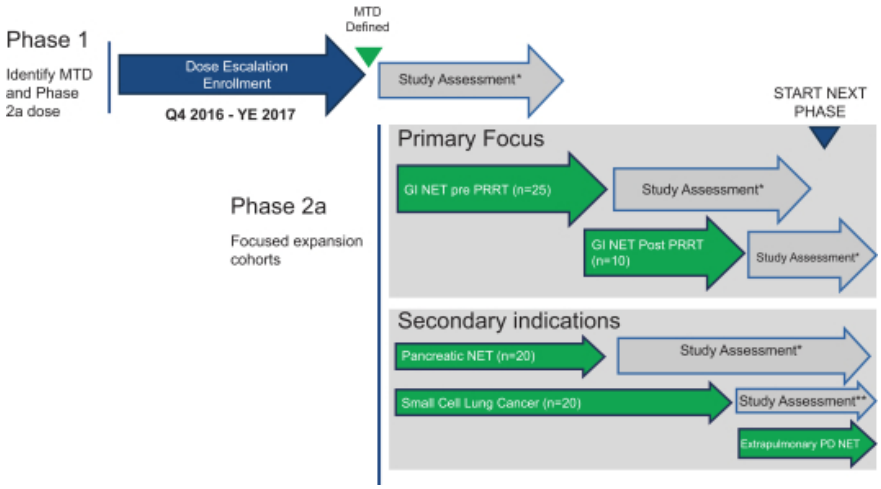
Market Opportunity

Up to 75% of malignant solid tumors express activated HSP90, which serves as the binding site for Tarveda's *Pentarin* miniature conjugates developed using the HSP90 binding technology. Given the wide array of possible tumor targets, Tarveda selects potential tumor targets based upon various criteria including where certain anti-cancer payloads, such as the topoisomerase 1 inhibitor, SN-38, will likely be most effective, where there are sizable patient populations that would benefit from the drug and where there is significant unmet need. Tarveda is designing the Phase 2a trial to explore various solid tumors in separate cohorts to evaluate the clinical benefits of treating patients with PEN-866 to determine where the drug may be most effective. Once Phase 2a results are known, there may be opportunities to request accelerated approval from the FDA in certain tumor types with significant unmet need such as, for example, genital-anal carcinoma and endometrial cancer.

Given the potential breadth of applicability of PEN-866, there are drugs approved or under development for various types of solid tumors, including drugs that rely on topoisomerase 1 inhibitor anti-cancer payloads, such as SN-38, as is used in PEN-866, including the untargeted drugs irinotecan and Onivyde, and the antibody drug conjugate, sacituzumab govitecan, which relies on binding to TROP-2. PEN-866 may have an advantage over other molecules with topoisomerase 1 inhibitors in that the PEN-866 binding moiety targets activated HSP90 which has been shown to be present in up to 75% of solid tumors, there is preclinical and clinical demonstration of prolonged accumulation of PEN-866 in tumors, and the release over time of SN-38 in solid tumors based on the design of PEN-866, which should increase the percentage of dividing cancer cells that will be exposed to this toxin leading to the potential of increased cancer cell death, while limiting impact to normal tissue.

PEN-221 — a somatostatin receptor binding conjugate

Tarveda's other clinical drug candidate, PEN-221, is a miniature drug conjugate in clinical evaluation for the treatment of patients with SSTR2 expressing tumors including gastrointestinal neuroendocrine tumors, small cell lung cancer and other neuroendocrine tumors. PEN-221 comprises a peptide that is highly selective for SSTR2 conjugated to the potent tubulin inhibitor anti-cancerpayload, DM1, through an optimized cleavable linker. PEN-221 has successfully completed its Phase 1 dose escalation and safety study, which assessed the safety, tolerability and PK of PEN-221 in a wide variety of SSTR2 expressing tumors. Patients with progressive, advanced solid malignancies that expressed SSTR2 receptor as detected by FDA approved radioisotope scans were enrolled in escalating cohorts of two to six patients. The primary objectives were to determine the maximum tolerated dose and safety profile of PEN-221, which is given intravenously for approximately one hour every three weeks. Based on the results of the study, PEN-221 was well-tolerated with an adverse event profile consistent with the anti-cancer payload, DM1. In addition, Tarveda observed encouraging clinical activity from PEN-221 in a heavily pre-treated patient population including reduction in sizes of tumor, an unconfirmed partial response in a GI NET patient and prolonged progression free survival. PEN-221 is currently advancing through the Phase 2a component of its initial clinical trial. This Phase 2a single agent trial consists of four separate cohorts of patients who express SSTR2 receptors by standard FDA approved radioisotope scanning. These cohorts are: GI NETs who failed previous therapy but have not received a peptide receptor radionuclide therapy ("PRRT"); GINETs who have failed previous therapy, which included PRRT; pancreatic neuroendocrine tumors whom have failed previous therapy; and small cell lung cancer who have failed prior therapy. All patients enrolled are receiving PEN-221 at 8.8mg/m2 once every three weeks until progression of disease or unacceptable toxicity. The endpoints for all four cohorts include: clinical benefit rate, duration of response, progression-free survival, and overall survival. The primary focus of the Phase 2a trial for PEN-221 is the GI NET cohorts with the other two cohorts being exploratory in nature. The initial cohort of patients with GI NETs who failed previous therapy but have not received PRRT completed enrollment in the fourth quarter of 2019 and is expected to have an interim data readout in the second half of 2020.



Tarveda expects initial data readout of the first GI NET cohort in the second half of 2020, which could allow for the design of a Phase 3 registrational trial thereafter. An additional cohort of GI NET (patients who have progressed after PRRT) and a cohort of small cell lung cancer patients will continue to enroll in 2020.

Market Opportunity

The prevalence of neuroendocrine tumors has been rising steadily and is estimated to be approximately 200,000 in the United States and over 450,000 in seven major markets including the United States, Japan,

Germany, Spain, United Kingdom, France and Italy. According to Delveinsight, the market for neuroendocrine tumor therapeutics was approximately $3.45 billion in 2016, and it continues to grow. Approximately half to two-thirds of patients with neuroendocrine tumors are diagnosed with GI NETs, and SSTR2 expression is evident in more than 80% of those tumors. Currently available treatments for GI NETs in the United States and other markets include somatostatin analogs, which are primarily prescribed for symptom relief, Afinitor (everolimus), a mTOR inhibitor and Lutathera, a PRRT that was approved in January 2018. PRRT, as with other radiotherapy modalities, requires unique and specific infrastructure and supply chain logistics to account for the radioactive nature of the drug.

As part of the standard of care diagnosis of neuroendocrine tumors, patients are screened using FDA approved and reimbursed imaging diagnostics to confirm SSTR2 expression. Tarveda ensures patients have been screened using the available imaging diagnostics for SSTR2 expression prior to beginning treatment on PEN-221. With an average overall survival rate of greater than ten years and the approved drugs in this indication not being curative, Tarveda believes that nearly all patients diagnosed with a GI NET and SSTR2 expression could be given PEN-221, if approved, over the course of their disease. Current treatment guidelines from the National Comprehensive Cancer Network do not distinguish lines of therapy after initial treatment with somatostatin analogs, leaving it to the physician to determine the course of treatment.

In addition to neuroendocrine tumors, Tarveda is also developing PEN-221 for the treatment of small cell lung cancers that express SSTR2. Small cell lung cancer accounts for 10-15% of the over two million lung cancer incidence worldwide. In the United States, small cell lung cancer incidence is estimated to be approximately 30,000, accounting for approximately 13% of all lung cancers. SSTR2 expression is estimated to be present in 20-30% of the small cell lung cancer patients and PEN-221 may potentially be applicable to this patient population. While there are multiple drugs, including topotecan, as second-line therapy in small cell lung cancer patients, the overall five-year survival rate is currently only about 6% demonstrating a clear need for additional therapy for these patients.

Tarveda's Strategy

Tarveda's mission is to discover, develop and commercialize a new class of potent and selective precision oncology medicines for the treatment of patients with various solid tumor malignancies. Tarveda develops its *Pentarin* binding miniature drug conjugates to enhance the effectiveness of promising anti-cancer payloads through selective targeting to solid tumors. To achieve this goal, Tarveda seeks to execute on the following strategy:

- **Advance its initial product candidate from its HSP90 binding miniature drug conjugate platform, PEN-866, through clinical development** — PEN-866 selectively binds in tumors to the activated form of HSP90 allowing for the accumulation of its potent topoisomerase 1 inhibitor payload, SN38, in various solid tumors. PEN-866 is currently nearing completion of its Phase 1 dose escalation and safety stage in an "all comers" trial of various types of patients with advanced solid tumors. Upon completion of the dose escalation study in the first quarter of 2020, Tarveda expects to immediately commence a Phase 2a trial. This next phase will evaluate the clinical benefits of PEN-866 in various types of solid tumors across several cohorts. Depending on the effectiveness of PEN-866 in these and other solid tumors, Tarveda believes that there may be potential accelerated FDA registrational paths towards approval.
- **Advance its second product candidate, PEN-221, through clinical development —** PEN-221, is a miniature drug conjugate *Pentarin* currently in its Phase 2a clinical evaluation for the treatment of patients primarily with SSTR2 expressing GI NET tumors. PEN-221 comprises a peptide that is highly selective for SSTR2 connected through a cleavable optimized linker to an anti-cancer cytotoxic payload, DM1. PEN-221 has successfully completed its Phase 1 safety study where Tarveda observed that PEN-221 was well-tolerated and exhibited encouraging clinical activity in a heavily pre-treated patient population. PEN-221 is currently progressing through its Phase 2a clinical trial with a focus on GI NETs. Tarveda expects initial data readout of the first GI NET cohort in the second half of 2020, which could allow for the design of a Phase 3 registrational trial thereafter.

- **Develop and discover other *Pentarin* miniature conjugates from its HSP90 binding miniature drug conjugate platform to identify additional clinical candidates** — Tarveda believes its HSP90 binding miniature drug conjugate platform presents a significant opportunity to take other potential high value candidates into the clinic in future periods. The construct of its HSP90 binding miniature drug conjugate platform allows for other high value, anti-cancer payloads and optimized linkers to be attached to a HSP90 small molecule target moiety resulting in the ability to selectively accumulate and retain these payloads in the tumor while limiting normal tissue toxicity. Tarveda believes that its technology and knowhow will allow it to bring additional *Pentarin* miniature drug conjugates to the clinic providing for additional registrational and partnership opportunities.
- **Evaluate strategic partnerships to maximize the value of its programs and platforms —** Tarveda's *Pentarin* platform, including the HSP90 binding miniature drug conjugate platform, has the flexibility to create miniature drug conjugates leveraging various optimized linkers and anti-cancer payloads. This provides for various strategic partnership opportunities for Tarveda to collaborate with other companies, proprietary payloads to bring clinically meaningful opportunities for cancer patients.
- **Attract and retain talented employees that share Tarveda's passion to treat patients living with various types of solid cancerous tumors —** Tarveda has assembled a team of industry experts and leaders with deep experience in drug development, discovery, pharmaceutical manufacturing, clinical operations and business management. Tarveda's team shares a collective passion in making a significant difference in the lives of patients living with various types of solid tumor cancers and will continue to bring forward its current clinical products and potential future candidates to advance its mission.

Tarveda's Collaboration Agreements

Tarveda enters into license and joint research and development agreements in the ordinary course of its business, including with various academic institutions, the National Cancer Institute and other parties in connection with its preclinical and clinical research. In addition, Tarveda has licensed the technology for its HSP90 binding miniature drug conjugate platform and lead product candidate developed thereunder, PEN-866, from Madrigal Therapeutics, Inc.

Madrigal Pharmaceuticals, Inc. License Agreement

In September 2016, Tarveda entered into a license agreement with Madrigal Pharmaceuticals, Inc. ("Madrigal"), pursuant to which Madrigal granted Tarveda certain exclusive, worldwide, royalty-bearing and sublicensable licenses under its relevant patents and know-how, for the development and commercialization of products containing HSP90 targeting moieties, including PEN-866, the lead candidate from Tarveda's HSP90 binding miniature drug conjugate platform. Under the agreement, Tarveda is solely responsible for the development, manufacturing and commercialization of products containing HSP90 targeting moieties, including PEN-866, and agreed to use commercially reasonable efforts to achieve certain progress milestones by the specified target dates in order to maintain its rights under the licenses. In the event of a failure to achieve progress milestones by Tarveda, Madrigal has the right, upon written notice, to (i) terminate the exclusive license relating to PEN-866 and (ii) convert the exclusive license to a non-exclusive license for any other products developed pursuant to the agreement, provided that such other product is not in development, at the later of the date of the missed progress milestones or September 14, 2019. Tarveda is currently in compliance with these progress milestones.

In connection with the entry into the agreement, Tarveda paid Madrigal an upfront fee of $0.2 million. In addition, Tarveda is obligated to make certain development and commercial milestone payments contingent on the achievement of specified clinical development, regulatory and first commercial sale milestones for PEN-866 up to an aggregate of approximately $163.4 million. Tarveda is also obligated to make certain development and commercial milestone payments contingent on the achievement of specified clinical development, regulatory and first commercial sale milestones for any other products containing HSP90 targeting moieties that fall within the

scope of the license up to an aggregate of $86.0 million. Tarveda will also make certain escalating, tiered royalty payments with a percentage in the single digits, based on potential future annual worldwide net sales of licensed products. These royalty payments will be reduced for subsequent products developed and commercialized after the first licensed product and will be subject to reduction due to patent expiration, payments made under certain licenses for third-party intellectual property and entry of biosimilar products to the market. The royalty term is a function of patent protection and regulatory exclusivity, and royalties are payable, on a product by product and country by country basis, until the latest to occur of expiration of the last to expire valid claim covering such product in such country or expiration of regulatory exclusivity for such product in such country. Valid claim generally means a claim of any issued and unexpired patent or patent application within the licensed patents that has not been held invalid or unenforceable by a final unappealable decision of a court or governmental agency of competent jurisdiction. Based on current valid claims in specific jurisdictions, the royalty term would expire no earlier than 2033 for PEN-866. However, this is subject to change if additional valid claims are granted, and may be further extended by patent term extension provisions associated with regulatory approval, and will be different for other products containing HSP90 targeting moieties that are developed, and will also depend on regulatory exclusivity. Accordingly, the end of the royalty term is not yet determinable. Tarveda has the right to sublicense, and agreed to pay Madrigal certain sublicensing fees in connection therewith, which it can use to offset future, commercial milestones or royalties owed to Madrigal.

Unless earlier terminated, the Madrigal license will expire on the last to expire of any payment obligation thereunder. Following completion of the first Phase 1 clinical trial for PEN-866, Tarveda has the right to terminate the agreement at any time with prior notice to Madrigal. The agreement may also be terminated by either party based on an uncured material breach by the other party or the bankruptcy of the other party. Madrigal may terminate the agreement, upon written notice to Tarveda, if Tarveda or any of its affiliates or sublicensees, directly or indirectly through any third party, commences an interference or opposition proceeding with respect to, or challenges the validity or enforceability of, any relevant patents under the licenses. Upon termination for any reason, the license granted by Madrigal to Tarveda to develop, manufacture and commercialize licensed products under the agreement will automatically terminate.

Manufacturing

Tarveda does not have, and nor does it currently plan to acquire or develop, the infrastructure, facilities or capabilities to manufacture cGMP, bulk drug substance or filled drug product for use in human clinical trials. Tarveda's manufacturing process involves readily available starting materials and uses standard manufacturing and storage capabilities. Tarveda utilizes third-party manufacturers such as contract manufacturing organizations ("CMOs") to produce, test and release cGMP bulk drug substance and drug product for its clinical trials. Tarveda would expect to continue to rely on such third parties to manufacture clinical trial material for the foreseeable future including the manufacturing of commercial supply of its products when approved. Tarveda expects that current and expected future contract counterparties have successful track records of manufacturing clinical and commercial products for other companies under cGMP compliance and have previously been inspected by regulatory authorities for compliance with cGMP standards.

Competition

The biotech and biopharmaceutical industries, including the oncology subsector, are characterized by rapid evolution of technologies, fierce competition and strong defense of intellectual property. Any product candidates that Tarveda successfully develops and commercializes will have to compete with existing therapies and new therapies that may become available in the future. While Tarveda believes that its *Pentarin* miniature drug conjugate platform, including its HSP90 binding miniature drug conjugate platform, along with its scientific expertise in the field of miniature drug conjugates, provide it with a competitive advantages, a wide variety of institutions, including large biopharmaceutical companies, specialty biotechnology companies, academic research departments and public and private research institutions, are actively developing potentially competitive products and technologies. Tarveda expects that its product candidates and its *Pentarin* miniature drug conjugate platform, including its HSP90 binding miniature drug conjugate platform will face competition from traditional

small or large molecule drugs that target specific cancers that are FDA-approved and marketed for the indications that Tarveda is pursuing, in addition to off-label use of current therapeutics and therapeutics in development; other drug conjugates using targeted approaches to direct payloads to cancerous tumors, such as ADCs; as well as newer approaches, such as immuno-oncology, which attempts to harness the patient's own immune system to fight cancer itself.

Many of Tarveda's competitors, either alone or with strategic partners, have substantially greater financial, technical and human resources than it does. Accordingly, its competitors may be more successful than it in obtaining approval for treatments and achieving widespread market acceptance, rendering Tarveda's treatments obsolete or non-competitive. Accelerated merger and acquisition activity in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of its competitors. These companies also compete with Tarveda in recruiting and retaining qualified scientific and management personnel, establishing clinical study sites and patient enrollment in clinical studies and acquiring technologies complementary to, or necessary for, Tarveda's programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Tarveda's commercial opportunity could be substantially limited in the event that its competitors develop and commercialize products that are more effective, safer, less toxic, more convenient or less expensive than its comparable products. Competitors may also obtain regulatory approvals before Tarveda, resulting in its competitors building a strong market position in advance of its products' entry, if any. Tarveda believes the factors determining the success of its product pipeline will be the efficacy, safety, cost and convenience of its product candidates.

Intellectual Property

Tarveda's commercial success will depend significantly on its and its licensors' ability to obtain and maintain patent and other proprietary protection for its product candidates and the other technology, inventions and improvements Tarveda considers important to its business, defend any patents Tarveda obtains or in-licenses, preserve the confidentiality of its trade secrets and operate without infringing the patents and proprietary rights of third parties. Tarveda's policy is to seek to protect its proprietary and intellectual property position by, among other methods, filing and in-licensing U.S., international (under Patent Cooperation Treaty ("PCT")) and foreign patent applications related to its product candidates and other proprietary technology, inventions and improvements that it considers important to the development and implementation of its business. Tarveda also relies on trade secrets, know-how and continuing technological innovation to develop and maintain its proprietary and intellectual property position.

Tarveda's intellectual property portfolio comprises a series of filings covering the PEN-221 and PEN-866 product candidates and its *Pentarin* platform and discovery programs including the HSP90 binding miniature drug conjugate platform, and includes both owned and in-licensed intellectual property. The PEN-221 product candidate filings include claims directed to product compositions, methods of manufacture and methods of using the pharmaceutical compositions, comprise eight granted patents with protection in Australia, China, Japan, South Korea, Russia, South Africa, and two in the United States with a third soon-to-be granted that expire in the year 2035. The PEN-866 product candidate filings include claims directed to product compositions, methods of manufacture and methods of using the pharmaceutical compositions, and comprise six granted patents with protection in Australia (two patents), China, Israel, Japan, and the United States with a patent soon-to-be granted in South Korea that expire in the year 2033. The portfolio for Tarveda's *Pentarin* platform and discovery programs including the HSP90 binding miniature drug conjugate platform embraces a series of families, with claims directed to product compositions, methods of manufacture and methods of using the pharmaceutical compositions, comprises 17 granted patents with protection in Australia, Canada, China, Israel, Japan, Mexico, Malaysia, Singapore, South Africa, Europe and United States, which expire in the years beginning in 2033 through 2037. Tarveda's portfolio also includes 147 active or open PCTs or other international filings, and four granted trademarks covering the company's name, logo and *Pentarin* miniature drug conjugate platform brand.

Regulatory framework

The term of individual patents depends upon the legal term for patents in the countries in which they are obtained. In most countries, including the United States, the patent term is 20 years from the earliest filing date of a non-provisional patent application. In the United States, a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in examining and granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier filed co-owned patent. The term of a patent that covers a drug or biological product may also be eligible for patent term extension when FDA approval is granted, provided statutory and regulatory requirements are met. However, as to the FDA component, the restoration period cannot be longer than five years and the total patent term including the restoration period must not exceed 14 years following the FDA approval. Additionally, only one patent may be extended, and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended. The duration of foreign patents varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest effective filing date. In the future, if and when Tarveda's product candidates receive approval by the FDA or foreign regulatory authorities, Tarveda expects to apply for patent term extensions on issued patents covering those products, depending upon the length of the clinical studies for each product and other factors. There can be no assurance that any of its pending patent applications will issue or that Tarveda will benefit from any patent term extension or favorable adjustments to the terms of any of its patents. The FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with Tarveda's assessment of whether such extensions are available, and may refuse to grant extensions to its patents, or may grant more limited extensions than it requests. An extension may also not be granted because of, for example, a failure to exercise due diligence during the testing phase or regulatory review process, failing to apply within applicable deadlines, failing to apply prior to the expiration of relevant patents, or otherwise failing to satisfy applicable requirements. The actual protection afforded by a patent varies on a product-by-product basis, from country-to-country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country, and the validity and enforceability of the patent.

In addition to patents, Tarveda relies upon unpatented trade secrets and know-how and continuing technological innovation to develop and maintain its competitive position. Tarveda seeks to protect its proprietary information, in part, by executing confidentiality agreements with its collaborators and scientific advisors, and non-competition, non-solicitation, confidentiality and invention assignment agreements with its employees and consultants. Tarveda also has or intends to implement executed agreements requiring assignment of inventions with selected scientific advisors and collaborators. These confidentiality agreements are designed to protect its proprietary information and, in the case of invention assignment agreements, to grant Tarveda ownership of technologies that are developed through a relationship with a third party. However, these agreements may be breached, and Tarveda may not have adequate remedies for any breach, with a third party. In addition, Tarveda's trade secrets may otherwise become known or be independently discovered by competitors. To the extent that Tarveda's commercial partners, collaborators, employees and consultants use intellectual property owned by others in their work for use, disputes may arise as to the rights in related or resulting know-how and inventions.

Tarveda also seeks to preserve the integrity and confidentiality of its proprietary technology and processes by maintaining physical security of its premises and physical and electronic security of its information technology systems. Although Tarveda has confidence in these individuals, organizations, and systems, agreements or security measures may be breached and Tarveda may not have adequate remedies for any breach. To the extent that Tarveda's employees, contractors, consultants, collaborators, and advisors use intellectual property owned by others in their work for it, disputes may arise as to the rights in related or resulting know-how and inventions. For more information regarding the risks related to Tarveda's intellectual property, proprietary technology, inventions, improvements, platforms and product candidates, please see the section entitled "*Risk Factors — Risks Related to Tarveda — Risks Related to Tarveda's Intellectual Property*."

Government Regulation

The FDA and other regulatory authorities at federal, state, and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring, and post-approval reporting of drug products such as those Tarveda is developing. Tarveda, along with its third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which it wishes to conduct studies or seek approval or licensure of its product candidates.

The process required by the FDA before drug product candidates may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's current GLP regulation;
- submission to the FDA of an IND, which must become effective before clinical trials may begin and must be updated annually or when significant changes are made;
- approval by an independent IRB or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the proposed drug product candidate for its intended purpose;
- preparation of and submission to the FDA of an NDA after completion of all pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of an NDA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with cGMP, and of selected clinical investigation sites to assess compliance with GCP; and
- FDA review and approval of the NDA to permit commercial marketing of the product for particular indications for use in the United States.

Preclinical and Clinical Development

Prior to beginning the first clinical trial with a product candidate, Tarveda must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must

be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

For purposes of NDA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1 — The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- Phase 2 — The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3 — The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

A registrational trial is a clinical trial that adequately meets regulatory agency requirements for the evaluation of a drug candidate’s efficacy and safety such that it can be used to justify the approval of the drug. Generally, registrational trials are Phase 3 trials but may be Phase 2 trials if the trial design provides a reliable assessment of clinical benefit, particularly in situations where there is an unmet medical need.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may be made a condition to approval of the NDA. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

NDA Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of an NDA requesting approval to market the product for one or more indications. The NDA must include all relevant data available from pertinent preclinical and clinical studies, including negative or ambiguous results

as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. A determination by the FDA within 60 days of the receipt of an NDA to file the application for review for its completeness is initiated at the time of submission. If the FDA determines there is significance to the missing or incomplete information in the context of the proposed drug product, the proposed indication(s), and the amount of time needed to address any given deficiency, it can issue a refusal-to-file letter. The submission of an NDA requires payment of a substantial application user fee to FDA, unless a waiver or exemption applies.

Once an NDA has been submitted, the FDA's goal is to review standard applications within ten months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews an NDA to determine, among other things, whether a product is safe and effective. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving an NDA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates an NDA and conducts inspections of manufacturing facilities where the product will be produced, the FDA may issue an approval letter or a Complete Response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response letter will describe all of the deficiencies that the FDA has identified in the NDA. In issuing the Complete Response letter, the FDA may recommend actions that the applicant might take to place the NDA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of an NDA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the NDA with a REMS to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies.

Expedited Development and Review Programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. The fast track program is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for

the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a fast track product has opportunities for frequent interactions with the review team during product development and, once an NDA is submitted, the product may be eligible for priority review. A fast track product may also be eligible for rolling review, where the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

A product intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product, including involvement of senior managers.

Any product is eligible for priority review if it has the potential to provide a significant improvement in the treatment, diagnosis or prevention of a serious disease or condition compared to marketed products. For products containing new molecular entities, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (compared with ten months under standard review).

Additionally, products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical studies to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. In addition, the FDA currently requires, as a condition for accelerated approval, pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusive approval (or exclusivity), which means that the FDA may not approve any other applications, including a full NDA, to market the same drug for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent the FDA from

approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-Approval Requirements

Any products manufactured or distributed by Tarveda pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which FDA assesses an annual program fee for each product identified in an approved NDA. Drug manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements upon Tarveda and its third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements upon Tarveda and any third-party manufacturers that it may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of a product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal of the FDA to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics and drugs. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA approved labeling. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective

advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by Tarveda and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

U.S. Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of the FDA approval of Tarveda's drug candidates, some of its U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years beyond the normal expiration of the patent, limited to the approved indication (or any additional indications approved during the period of extension), as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of an NDA plus the time between the submission date of an NDA and the approval of that application. Only one patent applicable to an approved drug is eligible for extension and only those claims covering the approved drug, a method for using it, or a method for manufacturing it may be extended and the application for the extension must be submitted prior to the expiration of the patent. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, Tarveda intends to apply for restoration of patent term for one of its currently owned patents, and if eligible for such restoration, to add patent term beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant NDA.

Marketing exclusivity provisions under the FDCA can also delay the submission or the approval of certain marketing applications for competing products. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to obtain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an abbreviated new drug application ("ANDA") or a 505(b)(2) NDA submitted by another company for another drug based on the same active moiety, regardless of whether the drug is intended for the same indication as the original innovator drug or for another indication. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed with the FDA by the innovator NDA holder. The FDCA also provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA, if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the modification for which the drug received approval on the basis of the new clinical investigations and does not prohibit the FDA from approving ANDAs or 505(b)(2) applications for drugs containing the active agent for the original indication or condition of use. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness. Orphan drug exclusivity, as described above, may offer a seven-year period of marketing exclusivity, except in certain circumstances. Pediatric exclusivity is another type of regulatory market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric trial in accordance with an FDA-issued "Written Request" for such a trial.

European Drug Development

In Europe, Tarveda's future drugs may also be subject to extensive regulatory requirements. As in the United States, medicinal products can only be marketed if a marketing authorization from the competent regulatory agencies has been obtained.

Similar to the United States, the various phases of preclinical and clinical research in Europe are subject to significant regulatory controls. Although the EU Clinical Trials Directive 2001/20/EC (the "Directive") has sought to harmonize the EU clinical trials regulatory framework, setting out common rules for the control and authorization of clinical trials in the EU, the EU Member States have transposed and applied the provisions of the Directive differently. This has led to significant variations in the member state regimes. Under the current regime, before a clinical trial can be initiated it must be approved in each of the EU countries where the trial is to be conducted by two distinct bodies: the National Competent Authority ("NCA") and one or more ECs. Under the current regime all suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial have to be reported to the NCA and ECs of the Member State where they occurred.

In 2014, a new Clinical Trials Regulation 536/2014 (the "Regulation") replacing the current Directive, was adopted. The Regulation will become directly applicable in all EU Member States (without national implementation) once the EU Portal and Database are fully functional. It is currently anticipated that the Regulation will apply in 2020. The Regulation seeks to simplify and streamline the approval of clinical trials in the EU. For example, the sponsor shall submit a single application for approval of a clinical trial via the EU Portal. As part of the application process, the sponsor shall propose a reporting Member State, who will coordinate the validation and evaluation of the application. The reporting Member State shall consult and coordinate with the other concerned Member States. If an application is rejected, it can be amended and resubmitted through the EU Portal. If an approval is issued, the sponsor can start the clinical trial in all concerned Member States. However, a concerned Member State can in limited circumstances declare an "opt-out" from an approval. In such a case, the clinical trial cannot be conducted in that Member State. The Regulation also aims to streamline and simplify the rules on safety reporting, and introduces enhanced transparency requirements such as mandatory submission of a summary of the clinical trial results to the EU Database.

European Drug Review and Approval

In the European Economic Area ("EEA"), which is comprised of the 28 Member States of the EU plus Norway, Iceland and Liechtenstein, medicinal products can only be commercialized after obtaining a Marketing Authorization ("MA"). There are two types of marketing authorizations:

The Community MA, which is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use of the EMA and which is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of drugs, such as biotechnology medicinal drugs, orphan medicinal drugs, and medicinal drugs containing a new active substance indicated for the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and viral diseases. The Centralized Procedure is optional for drugs containing a new active substance not yet authorized in the EEA, or for drugs that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU.

National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for drugs not falling within the mandatory scope of the Centralized Procedure. Where a drug has already been authorized for marketing in a Member State of the EEA, this National MA can be recognized in other Member States through the Mutual Recognition Procedure. If the drug has not received a National MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure. Under the Decentralized Procedure an identical dossier is submitted to the competent authorities of each of the Member States in which the MA is sought, one of

which is selected by the applicant as the Reference Member State ("RMS"). The competent authority of the RMS prepares a draft assessment report, a draft summary of the drug characteristics ("SPC") and a draft of the labeling and package leaflet, which are sent to the other Member States (referred to as the Member States Concerned) for their approval. If the Member States Concerned raise no objections, based on a potential serious risk to public health, to the assessment, SPC, labeling, or packaging proposed by the RMS, the drug is subsequently granted a national MA in all the Member States (*i.e.*, in the RMS and the Member States Concerned).

Under the above described procedures, before granting the MA, the EMA or the competent authorities of the Member States of the EEA make an assessment of the risk-benefit balance of the drug on the basis of scientific criteria concerning its quality, safety and efficacy.

European Chemical Entity Exclusivity

In Europe, new chemical entities, sometimes referred to as new active substances, qualify for eight years of data exclusivity upon marketing authorization and an additional two years of market exclusivity. This data exclusivity, if granted, prevents regulatory authorities in the EU from referencing the innovator's data to assess a generic application for eight years, after which generic marketing authorization can be submitted, and the innovator's data may be referenced, but not approved for two years. The overall ten-year period will be extended to a maximum of 11 years if, during the first eight years of those ten years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies.

Rest of the World Regulation

For other countries outside of the EU and the United States, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, drug licensing, pricing and reimbursement vary from country to country. In all cases the clinical trials must be conducted in accordance with GCP requirements and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If Tarveda fails to comply with applicable foreign regulatory requirements, it may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Coverage and Reimbursement

Sales of Tarveda's drugs will depend, in part, on the extent to which its drugs, once approved, will be covered by third-party payors, such as government health programs, commercial insurance and managed healthcare organizations. These third- party payors are increasingly reducing reimbursements for medical drugs and services. Additionally, the containment of healthcare costs has become a priority of federal and state governments, and the prices of drugs have been a focus in this effort. The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic drugs.

There may be significant delays in obtaining coverage and reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA or similar regulatory authorities outside of the United States. Moreover, eligibility for coverage and reimbursement does not imply that a drug will be paid for in all cases or at a rate that covers Tarveda's costs, including research, development, intellectual property, manufacture, sale and distribution expenses. Interim reimbursement levels for new drugs, if applicable, may also not be sufficient to cover Tarveda's costs and may not be made permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other

services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies, but also have their own methods and approval process apart from Medicare determinations.

In addition, diagnostic tests, such as the screening tests used to detect SSTR2 expression, require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, will apply to diagnostics.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the EU provides options for its member states to restrict the range of medicinal drugs for which their national health insurance systems provide reimbursement and to control the prices of medicinal drugs for human use. A member state may approve a specific price for the medicinal drug or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal drug on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical drugs will allow favorable reimbursement and pricing arrangements for any of Tarveda's drugs. Historically, drugs launched in the EU do not follow price structures of the United States and generally tend to be significantly lower.

Healthcare Reform

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of drug candidates, restrict or regulate post-approval activities and affect a biopharmaceutical company's ability to profitably sell any approved drugs.

The MMA established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription drugs. Unlike Medicare Part A and B, Part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for drugs for which Tarveda obtains marketing approval. However, any negotiated prices for its drugs covered by a Part D prescription drug plan will likely be lower than the prices Tarveda might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private third-party payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental third-party payors.

The American Recovery and Reinvestment Act of 2009 provides funding for the federal government to compare the effectiveness of different treatments for the same illness. The plan for the research was published in 2012 by the U.S. Department of Health and Human Services, the Agency for Healthcare Research and Quality and the National Institutes for Health, and periodic reports on the status of the research and related expenditures are made to Congress. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private third-party payors, it is not clear what effect, if any, the research will have on the sales of Tarveda's drug candidates, once approved, if any such drug or the condition that they are intended

to treat are the subject of a trial. It is also possible that comparative effectiveness research demonstrating benefits in a competitor's drug could adversely affect the sales of Tarveda's drug candidate. If third-party payors do not consider Tarveda's drugs to be cost-effective compared to other available therapies, they may not cover Tarveda's drugs after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow Tarveda to sell its drugs on a profitable basis.

The ACA enacted in March 2010, has had a significant impact on the healthcare industry. The ACA expanded coverage for the uninsured while at the same time containing overall healthcare costs. With regard to pharmaceutical products, the ACA, among other things, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees and taxes on manufacturers of certain branded prescription drugs, and a new Medicare Part D coverage gap discount program, in which manufacturers must now agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D.

Some of the provisions of the ACA have yet to be fully implemented, while certain provisions have been subject to judicial and Congressional challenges as well as recent efforts by the current U.S. President's administration to repeal or replace certain aspects of the ACA. Since January 2017, the current U.S. President has signed two Executive Orders and other directives designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, it has enacted laws that modify certain provisions of the ACA such as removing penalties, starting January 1, 2019, for not complying with the ACA's individual mandate to carry health insurance, delaying the implementation of certain ACA-mandated fees, and increasing the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D. On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas (Texas District Court Judge), ruled that the individual mandate is a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the Tax Cuts and Jobs Act, the remaining provisions of the ACA are invalid as well. While the Texas District Court Judge, as well as the current U.S. President's administration and the CMS have stated that the ruling will have no immediate effect, it is unclear how this decision, subsequent appeals, and other efforts to repeal and replace the ACA will impact the ACA.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted. On August 2, 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, started in April 2013, and, due to subsequent legislative amendments, will stay in effect through 2029 unless additional Congressional action is taken. On January 2, 2013, the then-U.S. President signed into law the ATRA, which, among other things, also reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

Further, there has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. For example, the current U.S. President's administration released a "Blueprint" to lower drug prices and reduce out of pocket costs of drugs that contains

additional proposals to increase manufacturer competition, increase the negotiating power of certain federal healthcare programs, incentivize manufacturers to lower the list price of their products and reduce the out of pocket costs of drug products paid by consumers. In addition, the current U.S. President's administration's budget proposal for fiscal year 2020 contains further drug price control measures that could be enacted during the budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. For example, in May 2019, CMS issued a final rule to allow Medicare Advantage Plans the option of using step therapy for Part B drugs beginning January 1, 2020. This final rule codified CMS's policy change that was effective January 1, 2019. Although some of these and other measures may require additional authorization to become effective, Congress and the current U.S. President's administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs.

Additionally, on May 30, 2018, the Trickett Wendler, Frank Mongiello, Jordan McLinn, and Matthew Bellina Right to Try Act of 2017 (the "Right to Try Act") was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase I clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a pharmaceutical manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act.

Other Healthcare Laws

Tarveda's current and future arrangements with healthcare providers, third-party payors and customers may expose it to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which it conducts research, markets, sells and distributes any products for which it obtains marketing approval. These laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security and physician sunshine laws and regulations.

The federal Anti-Kickback Statute prohibits, among other things, any person from knowingly and willfully offering, soliciting, receiving or paying remuneration, directly or indirectly, to induce either the referral of an individual, for an item or service or the purchasing or ordering of a good or service, for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs. The federal Anti-Kickback Statute is subject to evolving interpretations. In the past, the government has enforced the federal Anti-Kickback Statute to reach large settlements with healthcare companies based on allegedly improper consulting and other financial arrangements with physicians. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act. The majority of states also have anti-kickback laws, which establish similar prohibitions and in some cases may apply to items or services reimbursed by any third-party payor, including commercial insurers.

Additionally, the federal civil and criminal false claims laws, including the False Claims Act, and civil monetary penalties law, prohibits knowingly presenting or causing the presentation of a false, fictitious or fraudulent claim for payment to the U.S. government. Actions under the False Claims Act may be brought by the Attorney General or as a *qui tam* action by a private individual in the name of the government. The federal government is using the False Claims Act, and the accompanying threat of significant liability, in its investigation and prosecution of pharmaceutical and biotechnology companies throughout the United States, for example, in connection with the promotion of products for unapproved uses and other sales and marketing practices. The government has obtained multi-million and multi-billion dollar settlements under the False Claims Act in addition to individual criminal convictions under applicable criminal statutes. Given the significant size of

actual and potential settlements, it is expected that the government will continue to devote substantial resources to investigating healthcare providers' and manufacturers' compliance with applicable fraud and abuse laws.

The federal HIPAA also created additional federal civil and criminal penalties for, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

There has also been a recent trend of increased federal and state regulation of payments made to physicians and other healthcare providers. The ACA, through the Physician Payments Sunshine Act, imposes new reporting requirements on certain drug manufacturers for payments made by them to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Drug manufacturers are required to submit annual reports to the government and these reports are posted on a website maintained by CMS. Certain states also mandate implementation of compliance programs, impose restrictions on drug manufacturer marketing practices and/or require the tracking and reporting of gifts, compensation and other remuneration to physicians.

Tarveda may also be subject to data privacy and security requirements that may impact the way in which it conducts research and operates its business. HIPAA, as amended by the HITECH and their respective implementing regulations, including the final omnibus rule published on January 25, 2013, impose obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information on covered entities, including certain healthcare providers, health plans, and healthcare clearinghouses, as well as individuals and entities that provide services on behalf of a covered entity that involve individually identifiable health information, known as business associates.

Many states have similar laws and regulations that may differ from each other and federal law in significant ways, thus complicating compliance efforts. For example, states have anti-kickback and false claims laws that may be broader in scope than analogous federal laws and may apply regardless of payer. In addition, state data privacy laws that protect the security of health information may differ from each other and may not be preempted by federal law. Moreover, several states have enacted legislation requiring pharmaceutical manufacturers to, among other things, establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales and marketing activities, report information related to drug pricing, require the registration of sales representatives, and prohibit certain other sales and marketing practices.

If Tarveda's operations are found to be in violation of any of the federal and state laws described above or any other governmental regulations that apply to it, Tarveda may be subject to significant civil, criminal, and administrative penalties, including, without limitation, damages, fines, imprisonment, exclusion from participation in government healthcare programs, additional reporting obligations and oversight if Tarveda becomes subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, and the curtailment or restructuring of its operations.

Data Privacy Regulations

In addition, Tarveda may be directly subject to certain state laws concerning privacy and data security. For example, California recently enacted the CCPA, which creates new individual privacy rights for California consumers (as defined in the law) and places increased privacy and security obligations on entities handling certain personal data of consumers or households. The CCPA will require covered companies to provide new disclosure to consumers about such companies' data collection, use and sharing practices, provide such

consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. The CCPA goes into effect on January 1, 2020, and the California Attorney General may bring enforcement actions for violations beginning July 1, 2020. The CCPA was amended on September 23, 2018, and it remains unclear what, if any, further modifications will be made to this legislation or how it will be interpreted. As currently written, the CCPA may impact Tarveda's business activities and exemplifies the vulnerability of its business to the evolving regulatory environment related to personal data and protected health information. Existing state laws governing the privacy and security of personally identifiable information, and, in some states, health information, impose differing requirements, thus complicating Tarveda's compliance efforts.

In addition to EU regulations related to the approval and commercialization of its products, Tarveda may be subject to the EU's GDPR. The GDPR went into effect on May 25, 2018. The GDPR introduced new data protection requirements in the EU, as well as potential fines for noncompliant companies of up to the greater of €20 million or 4% of annual global revenue. The regulation imposes numerous new requirements for the collection, use and disclosure of personal information, including more stringent requirements relating to consent and the information that must be shared with data subjects about how their personal information is used, the obligation to notify regulators and affected individuals of personal data breaches, extensive new internal privacy governance obligations and obligations to honor expanded rights of individuals in relation to their personal information (*e.g.*, the right to access, correct and delete their data). In addition, the GDPR includes restrictions on cross-border data transfer. The GDPR will increase Tarveda's responsibility and liability in relation to personal data that it processes, and Tarveda may be required to put in place additional mechanisms to ensure compliance with the new EU data protection rules. Further, the United Kingdom's vote in favor of exiting the EU, often referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is unclear whether the United Kingdom will enact data protection legislation equivalent to the GDPR and how data transfers to and from the United Kingdom will be regulated.

Employees

As of December 31, 2019, Tarveda had 29 full-time employees, 14 of whom were primarily engaged in research and development activities and 10 of whom had an M.D. or Ph.D. degree. None of Tarveda's employees is represented by a labor union or covered by a collective bargaining agreement.

Facilities

Tarveda occupies approximately 16,500 square feet of office and laboratory space in Watertown, Massachusetts, under a lease that expires in January 2023, which it uses for its corporate headquarters as well as certain of its research and development activities.

Legal Proceedings

From time to time, Tarveda may become involved in litigation relating to claims arising from the ordinary course of business. Tarveda's management believes that there are currently no claims or actions pending against it, the ultimate disposition of which would have a material adverse effect on its results of operations, financial condition or cash flows.

TARVEDA MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of Tarveda's financial condition and results of operations together with Tarveda's financial statements and the related notes appearing elsewhere in this proxy statement/prospectus/information statement. In addition to historical information this discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Tarveda's actual results may differ materially from those results described in or implied by the forward-looking statements discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors — Risks Related to Tarveda" appearing elsewhere in this proxy statement/prospectus/information statement.

Overview

Tarveda is a clinical stage biopharmaceutical company developing a new class of potent and selective precision oncology medicines, which it refers to as *Pentarin* miniature conjugates, for the treatment of patients with various solid tumor malignancies. Tarveda's *Pentarin* miniature conjugates are specifically engineered through chemistry to achieve focused accumulation of the anti-cancer payload in the tumor for extended periods of time while simultaneously limiting exposure to surrounding healthy tissue thereby minimizing toxicity. Tarveda currently has two *Pentarin* miniature conjugates in clinical trials. Its first clinical program, PEN-866, is its initial candidate from its HSP90 binding miniature drug conjugate platform, which it in-licensed from Madrigal Pharmaceuticals, Inc. Tarveda's second clinical program, PEN-221, is a *Pentarin* currently in clinical evaluation for the treatment of patients with tumors expressing SSTR2 on the cell surface such as GI NET small cell lung cancer and other neuroendocrine tumors.

Since 2016, when it spun out of a legacy business and renamed itself Tarveda Therapeutics, Inc., Tarveda has devoted substantially all of its efforts and financial resources to staffing, business planning, raising capital, acquiring or discovering product candidates and securing related intellectual property rights and conducting discovery and research and development activities for its product candidates and its *Pentarin* platform, including the HSP90 binding miniature drug conjugate platform. Tarveda does not have any products approved for sale and has not generated any revenue from product sales or licensing its *Pentarin* platform to third parties. Tarveda has funded its operations to date primarily with proceeds from sales of redeemable convertible preferred stock and proceeds from the issuance of warrants and borrowings under loan and security agreements. Through December 31, 2019, Tarveda had received net proceeds of $121.4 million from sales of its redeemable convertible preferred stock (including proceeds from warrant issuances, which convert into preferred stock) and gross proceeds of $24.5 million from borrowings under various loan and security agreements.

Tarveda has incurred significant operating losses since inception. Tarveda's ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of one or more of Tarveda's current or future product candidates. Tarveda's net losses were $22.1 million and $19.0 million for the years ended March 31, 2019 and 2018, respectively and $16.3 million and $16.5 million for the nine months ended December 31, 2019 and 2018, respectively. As of December 31, 2019, Tarveda had an accumulated deficit of $121.5 million. Tarveda expects to continue to incur significant expenses and increasing operating losses for at least the next several years. Tarveda expects that its expenses and capital requirements will increase substantially in connection with its ongoing activities particularly if and as Tarveda:

- conducts additional clinical trials for its product candidates;
- continues to discover and develop additional product candidates;
- acquires or in-licenses other product candidates and technologies;
- maintains, expands, and protects its intellectual property portfolio;

- hires additional clinical, scientific and commercial personnel;
- establishes a commercial manufacturing source and secures supply chain capacity sufficient to provide commercial quantities of any product candidates for which it may obtain regulatory approval;
- seeks regulatory approvals for any product candidates that successfully complete clinical trials;
- establishes a sales, marketing and distribution infrastructure to commercialize any products for which it may obtain regulatory approval; and
- adds operation, financial and management information systems and personnel, including personnel to support its product development and planned future commercialization efforts, as well as to support its transition to a public reporting company.

Tarveda will not generate revenue from product sales unless and until Tarveda successfully completes clinical development and obtains regulatory approval for its product candidates. If Tarveda obtains regulatory approval for any of its product candidates and does not enter into a commercialization partnership, Tarveda expects to incur significant expenses related to developing Tarveda's internal commercialization capability to support product sales, marketing, manufacturing and distribution activities. Further, in the event that the Merger, as described below, occurs, Tarveda expects to incur additional costs associated with operating as a public company.

As a result, Tarveda will need substantial additional funding to support its continuing operations and pursue its growth strategy. Until such time as Tarveda can generate significant revenue from product sales or licensing its *Pentarin* platform technology, including the HSP90 binding miniature drug conjugate platform, if ever, Tarveda expects to finance its operations through the sale of equity offerings, debt financings or other capital sources, which may include collaborations with other companies or other strategic transactions. Tarveda may be unable to raise additional funds or enter into other agreements or arrangements when needed on favorable terms, or at all. If Tarveda fails to raise capital or enter into such agreements as, and when, needed, Tarveda could have to significantly delay, reduce or eliminate development and commercialization of one or more of its product candidates or delay its pursuit of potential in-licenses or acquisitions.

Because of the numerous risks and uncertainties associated with product development, Tarveda is unable to predict the timing or amount of increased expenses or when or if it will be able to achieve or maintain profitability. Even if Tarveda is able to generate product sales, Tarveda may not become profitable. If Tarveda fails to become profitable or is unable to sustain profitability on a continuing basis, then Tarveda may be unable to continue its operations at planned levels and be forced to reduce or terminate its operations.

Tarveda expects that its existing cash and cash equivalents will be sufficient to fund its operating expenses, capital expenditure requirements and debt service payments through September 2020. Tarveda has based this estimate on assumptions that may prove to be wrong, and Tarveda could exhaust its available capital resources sooner than it expects. See "*—Liquidity and Capital Resources*." Beyond that point, Tarveda will need to raise additional capital to finance its operations, which cannot be assured. Tarveda has concluded that this circumstance raises substantial doubt about its ability to continue as a going concern within one year after December 23, 2019, the issuance date of its annual financial statements for the year ended March 31, 2019. See Note 1 of Tarveda's financial statements appearing elsewhere in this proxy statement/prospectus/information statement for additional information on its assessment.

Similarly, in its report on Tarveda's financial statements for the year ended March 31, 2019, Tarveda's independent registered public accounting firm included an explanatory paragraph stating that Tarveda's recurring losses from operations and required additional funding to finance Tarveda's operations raise substantial doubt about its ability to continue as a going concern.

Series 1 Financing

On December 12, 2019, prior to the execution of the Merger Agreement, Tarveda issued 12,382,559 shares of its Series 1 Preferred Stock, $0.0001 par value per share (the "Series 1 Preferred") at a price of $1.10108 per share in consideration for gross proceeds of approximately $13.6 million (the "Series 1 Financing"). In conjunction with the Series 1 Financing, each outstanding share of common stock and preferred stock (other than the Series 1 Preferred) held by each stockholder of Tarveda that was an accredited investor and purchased at least its full pro rata portion of the shares of Series 1 Preferred issued and sold in the Series 1 Financing, was exchanged for a number of shares of Tarveda's Series CS Preferred Stock $0.0001 par value per share (the "Series CS Preferred") equal to the number of shares of common stock issuable upon conversion under original terms immediately prior to the Series 1 Financing.

On December 14, 2019, all outstanding shares of Tarveda's Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series C Preferred Stock and Series D Preferred Stock (collectively, the "Existing Preferred Stock"), that were not exchanged for Series CS Preferred Stock, were automatically converted into shares of Tarveda common stock at the conversion rate then in effect for each such series (the "Existing Preferred Automatic Conversion"). The warrants to purchase shares of Tarveda's Series D Preferred Stock held by Oxford Finance LLC (the "Oxford Series D Warrants") were amended and restated such that they are exercisable for the same number of shares of Series 1 Preferred as the number of shares of Series D Preferred Stock that they would have been exercisable for prior to the amendment and restatement. In connection with the Existing Preferred Automatic Conversion, all other warrants exercisable for Tarveda's Existing Preferred Stock became exercisable for a number of shares of Tarveda common stock as the holder of such warrant would have received had they held the underlying shares of Existing Preferred Stock immediately prior to the Existing Preferred Automatic Conversion. Prior to the close of the Merger, it is anticipated that all outstanding shares of Series 1 Preferred and Series CS Preferred will be converted into Tarveda common stock at the conversion rate then in effect.

Proposed Merger with Organovo

On December 13, 2019, Organovo, Merger Sub and Tarveda entered into the Merger Agreement, pursuant to which the Merger Sub, a wholly owned subsidiary of Organovo, will merge with and into Tarveda, with Tarveda continuing as a wholly owned subsidiary of Organovo and the surviving company of the Merger. Organovo and Tarveda believe that the Merger will result in a clinical-stage biopharmaceutical company focused on the discovery, development and commercialization of novel therapeutics for the treatment of patients with solid tumor malignancies.

The Merger will be accounted for as a reverse recapitalization in accordance with U.S. GAAP. Under this method of accounting, Tarveda will be deemed to be the accounting acquirer for financial reporting purposes. This determination was primarily based on the expectations that, immediately following the Merger: (1) Tarveda Stockholders will own a substantial majority of the voting rights of the combined organization; (2) Tarveda will designate a majority of the initial members of the board of directors of the combined organization; and (3) Tarveda's senior management will hold all key positions in senior management of the combined organization. Accordingly, for accounting purposes, the Merger will be treated as the equivalent of Tarveda issuing stock to acquire the net assets of Organovo. As a result of the Merger, the net assets of Organovo will be recorded at their acquisition-date fair values in the financial statements of Tarveda and the reported operating results prior to the business combination will be those of Tarveda.

Financial Operations Overview

Revenue

To date, Tarveda has not generated any revenue from its product sales or its *Pentarin* platform technologies and does not expect to generate any revenue from the sale of products in the foreseeable future. If Tarveda's development efforts for PEN-866 and PEN-221 or additional product candidates that Tarveda develops in the

future are successful and result in marketing approval, or if Tarveda enters into collaboration or license agreements with third parties, Tarveda may generate revenue in the future from a combination of product sales or payments from such collaboration or license agreements. Tarveda cannot predict if, when, or to what extent it will generate revenue from the commercialization of its product candidates. Tarveda may never succeed in obtaining regulatory approval for any of its product candidates.

Operating Expenses

Research and Development

Research and development expenses consist primarily of costs incurred in connection with the preclinical and clinical development and manufacture of PEN-866 and PEN-221, and include:

- salaries, benefits, stock-based compensation, consultants and other related costs for individuals involved in research and development activities;
- external research and development expenses incurred under agreements with CROs investigative sites and other scientific development services;
- costs incurred under agreements with CMOs for developing and manufacturing material for preclinical studies and clinical trials;
- licensing agreements and associated milestones;
- costs related to compliance with regulatory requirements;
- foreign currency gains and losses relating to preclinical and clinical development and manufacture activities taking place in other countries;
- lab supplies and other lab related expenses; and
- facilities and other allocated expenses, which include direct and allocated expenses for rent, insurance and other operating costs.

Tarveda expenses research and development costs as incurred and recognizes external development costs based on an evaluation of the progress to completion of specific tasks using information provided to Tarveda by its service providers. This process involves reviewing open contracts and purchase orders, communicating with its personnel to identify services that have been performed on its behalf, and estimating the level of service performed and the associated cost incurred for the service when Tarveda has not yet been invoiced or otherwise notified of actual costs. Nonrefundable advance payments for goods and services to be received in the future for use in research and development activities are deferred and capitalized in prepaid expenses and other current assets. The capitalized amounts are expensed as the related goods are delivered or the services are performed. Upfront payments, milestone payments and annual maintenance fees under license agreements are expensed in the period in which they are incurred.

Tarveda's direct research and development expenses are tracked by product candidate and consist primarily of external costs, such as fees paid to outside consultants, CROs, CMOs and research laboratories in connection with its preclinical development, process development, manufacturing and clinical development activities. Tarveda's direct research and development expenses by product candidate also include fees incurred under third-party license agreements. Tarveda does not allocate employee costs and costs associated with its discovery efforts, laboratory supplies and facilities, including depreciation or other indirect costs, to specific product candidates because these costs are deployed across multiple programs and, as such, are not separately classified. Tarveda uses its internal resources primarily to conduct its research and discovery as well as for managing its preclinical development, process development, manufacturing and clinical development activities. These employees work across multiple programs and, therefore, Tarveda does not track these costs by product candidate.

The following table summarizes Tarveda's research and development expenses incurred by product candidate:

	Year Ended March 31,		Nine Months Ended December 31,	
	2019	2018	2019	2018
			(unaudited)	
Direct research and development expenses by product candidate:				
PEN-866	$ 2,468	$ 1,733	$ 1,745	$ 1,720
PEN-221	4,118	3,033	2,323	3,455
Discovery	937	805	448	769
Unallocated research and development expenses:				
Personnel-related (including stock-based compensation)	5,936	4,965	4,305	4,257
Other	3,226	3,663	2,303	2,524
Total research and development expenses	$ 16,685	$ 14,199	$ 11,124	$ 12,725

Research and development activities are central to Tarveda's business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. As a result, Tarveda expects research and development costs to increase significantly for the foreseeable future as it continues the development of PEN-866 and PEN-221 and any product candidates Tarveda may develop in the future. As of December 31, 2019, Tarveda cannot accurately project total program-specific expenses through commercialization. There are numerous factors associated with the successful commercialization of PEN-866 and PEN-221 and any product candidates Tarveda may develop in the future, including future trial design and various regulatory requirements, many of which cannot yet be determined with accuracy based on Tarveda's stage of development. Additionally, future commercial and regulatory factors beyond Tarveda's control will impact its clinical development program and plans.

The successful development and commercialization of PEN-866 and PEN-221 and any product candidates Tarveda may develop in the future is highly uncertain. At this time, Tarveda cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the preclinical and clinical development of any of its product candidates. This is due to the numerous risks and uncertainties associated with product development and commercialization, including the following:

- the timing and progress of preclinical and clinical development activities;
- the number and scope of preclinical and clinical programs Tarveda decides to pursue;
- the ability to maintain current research and development programs and to establish new ones;
- establishing an appropriate safety profile with IND enabling studies;
- successful patient enrollment in, and the initiation and completion of, clinical trials;
- the successful completion of clinical trials with safety, tolerability and efficacy profiles that are satisfactory to the FDA or any comparable foreign regulatory authority;
- the receipt of regulatory approvals from applicable regulatory authorities;
- the timing, receipt and terms of any marketing approvals from applicable regulatory authorities;
- Tarveda's ability to establish new licensing or collaboration arrangements;
- the performance of Tarveda's future collaborators, if any;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;

- development and timely delivery of commercial-grade drug formulations that can be used in Tarveda's planned clinical trials and for commercial launch;
- obtaining, maintaining, defending and enforcing patent claims and other intellectual property rights;
- launching commercial sales of product candidates, if approved, whether alone or in collaboration with others; and
- maintaining a continued acceptable safety profile of the product candidates following approval.

Any changes in the outcome of any of these variables with respect to the development of Tarveda's product candidates in preclinical and clinical development could mean a significant change in the costs and timing associated with the development of these product candidates. For example, if the FDA or another regulatory authority were to delay Tarveda's planned start of clinical trials or requires Tarveda to conduct clinical trials or other testing beyond those that Tarveda currently expects, or if Tarveda experiences significant delays in enrollment in any of its planned clinical trials, Tarveda could be required to expend significant additional financial resources and time to complete clinical development of that product candidate. Tarveda may never obtain regulatory approval for any of its product candidates. Drug commercialization will take several years and millions of dollars in development costs.

General and Administrative

General and administrative expenses consist primarily of personnel-related expenses, including salaries, benefits, and stock-based compensation expenses for personnel in executive, finance, accounting, human resources and other administrative functions. Other significant general and administrative expenses include legal fees relating to patent, intellectual property and corporate matters, and fees paid for accounting, consulting and other professional services, as well as facilities, and other allocated expenses, which include direct and allocated expenses for rent, insurance and other operating costs.

Tarveda anticipates that its general and administrative expenses will increase in the future as its business expands to support its continued research and development activities, including its future clinical programs. These increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, among other expenses. Tarveda also anticipates increased expenses associated with being a public company, including costs for audit, legal, regulatory, and tax-related services related to compliance with the rules and regulations of the SEC listing standards applicable to companies listed on a national securities exchange, director and officer insurance premiums and investor relations costs.

Other Income (Expense)

Interest Income

Interest income consists of interest earned on Tarveda's cash equivalents, which consist of money market funds. Tarveda's interest income has not been significant due to low interest rates earned on invested balances.

Interest Expense

Interest expense consists of interest charged on outstanding borrowings associated with Tarveda's loan and security agreements, as well as amortization of debt issuance costs and accretion of a final payment payable upon the maturity or the repayment in full of all obligations under such loans. Tarveda expects that its interest expense will increase in connection with its senior secured loan from Oxford, entered into in March 2019, under which it borrowed $10.0 million.

Change in Fair Value of Warrant Liabilities

Tarveda issued warrants to purchase shares of its preferred stock, which are liability classified and are remeasured to fair value at each reporting date, with changes in the fair value recognized as a component of other

income (expense) in its statement of operations and comprehensive loss. Tarveda will continue to recognize changes in the fair value of each warrant comprising the warrant liability until each respective warrant is exercised, expires or qualifies for equity classification.

Upon the closing of the Merger, pursuant to the Merger Agreement, all of Tarveda's outstanding warrants will be converted into and become warrants to purchase shares of Organovo common stock and become exercisable for Organovo's common stock instead of Tarveda's capital stock, after which the warrants would be reclassified to equity and would no longer be required to be remeasured at fair value.

Loss on Extinguishment of Debt

Tarveda used proceeds from each loan to repay outstanding balances under prior loans that were outstanding at the time. In connection with the repayment of loans from Oxford and Silicon Valley Bank ("SVB"), Tarveda recorded a loss on extinguishment in the years ended March 31, 2019 and 2018. There was no gain or loss recorded in connection with Tarveda's debt arrangements in the nine months ended December 31, 2019 and 2018.

Other Income (Expense)

Other income (expense) consists primarily of investment income and accretion income related to Tarveda's available-for-sale investments.

Income Taxes

Since its inception, Tarveda has not recorded any income tax benefits for the net losses it has incurred in each year or for its earned research and development tax credits, as Tarveda believes, based upon the weight of available evidence, that it is more likely than not that all of its net operating loss carryforwards, and tax credits will not be realized. As of March 31, 2019, Tarveda had U.S. federal and state net operating loss carryforwards of $93.5 million and $93.1 million, respectively, which may be available to offset future income tax liabilities. As of March 31, 2019, $54.1 million of these federal net operating loss carryforwards will begin to expire in 2031, and $39.4 million can be carried forward indefinitely. As of March 31, 2019, Tarveda also had U.S. federal and state research and development tax credit carryforwards of $3.0 million and $1.2 million, respectively, which may be available to offset future tax liabilities and each begin to expire in 2028. Tarveda has recorded a full valuation allowance against its net deferred tax assets at each balance sheet date.

On December 22, 2017, President Trump signed into law the Tax Act that significantly reforms the Internal Revenue Code of 1986, as amended. The Tax Act, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, effective as of January 1, 2018; limitation of the tax deduction for interest expense; limitation of the deduction for net operating losses to 80% of annual taxable income and elimination of net operating loss carrybacks, in each case, for losses arising in taxable years beginning after December 31, 2017 (though any such tax losses may be carried forward indefinitely); and modifying or repealing many business deductions and credits, including reducing the business tax credit for certain clinical testing expenses incurred in the testing of certain drugs for rare diseases or conditions generally referred to as "orphan drugs". The effect of the Tax Act is reflected in the provision for income taxes for the years ended March 31, 2019 and 2018.

Results of Operations

Comparison for the Nine Months Ended December 31, 2019 and 2018

The following table summarizes Tarveda's results of operations for the nine months ended December 31, 2019 and 2018 (in thousands):

	Nine Months Ended December 31,		
	2019	2018	Change
	(unaudited)		
Operating expenses:			
Research and development	$ 11,124	$ 12,725	$ (1,601)
General and administrative	4,709	3,679	1,030
Total operating expenses	15,833	16,404	(571)
Loss from operations	(15,833)	(16,404)	571
Other (expense) income:			
Interest expense, net	(664)	(374)	(290)
Change in fair value of warrant liabilities	16	10	6
Other income, net	187	249	(62)
Total other expense, net:	(461)	(115)	(346)
Net loss	$ (16,294)	$ (16,519)	$ 225

Research and Development Expenses

	Nine Months Ended December 31,		
	2019	2018	Change
	(unaudited)		
Direct research and development expenses by product candidate:			
PEN-866	$ 1,745	$ 1,720	$ 25
PEN-221	2,323	3,455	(1,132)
Discovery	448	769	(321)
Unallocated research and development expenses:			
Personnel-related (including stock-based compensation)	4,305	4,257	48
Other	2,303	2,524	(221)
Total research and development expenses	$ 11,124	$ 12,725	$ (1,601)

Research and development expenses were $11.1 million for the nine months ended December 31, 2019, compared to $12.7 million for the nine months ended December 31, 2018. The decrease of $1.6 million was primarily due to a decrease of $1.1 million in external costs related to the ongoing clinical programs for Tarveda's two product candidates, PEN-866 and PEN-221.

Direct expenses of Tarveda's PEN-866 product candidate were $1.7 million for both the nine months ended December 31, 2019 and 2018, due to the continuation of its Phase 1 clinical trial. Tarveda expects that its research and development expenses for PEN-866 will increase over the next several years as it plans to advance PEN-866's clinical stage activities.

Direct expenses of Tarveda's PEN-221 product candidate decreased by $1.1 million in the nine months ended December 31, 2019, compared to the nine months ended December 31, 2018. The decrease was primarily

due to a decrease of $0.9 million in costs associated with the manufacturing expenses and related raw materials necessary to produce the drug supporting the PEN-221 clinical trial. Due to the amount of drug manufactured in the nine months ending December 31, 2018, less manufacturing was required in the nine months ending December 31, 2019. The remaining decrease of $0.2 million was due to the timing of clinical trial expenses incurred. Tarveda expects that its research and development expenses for PEN-221 will increase substantially over the next several years as it continues to enroll patients into its ongoing Phase 2a trial.

Discovery expenses are expenses incurred in the research and discovery of potential new product candidates. This amount decreased $0.3 million period over period due to the focus on the advancement of Tarveda's current product candidates.

Unallocated research and development expenses decreased slightly to $6.6 million for the nine months ended December 31, 2019 from $6.8 million for the nine months ended December 31, 2018. Personnel-related costs for the nine months ended December 31, 2019 and 2018 included stock-based compensation of $0.2 million and $0.1 million, respectively.

General and Administrative Expenses

General and administrative expenses were $4.7 million for the nine months ended December 31, 2019, compared to $3.7 million for the nine months ended December 31, 2018. The increase of $1.0 million was primarily due to a $1.0 million increase in consulting and professional fees. Consulting and professional fees increased primarily due to higher audit, legal, and consulting costs incurred to support the Merger. Personnel-related costs for the nine months ended December 31, 2019 and 2018 included stock-based compensation of $0.3 million.

Other Expense

Other expense was $0.5 million during the nine months ended December 31, 2019, compared to approximately $0.1 million in other expense for the nine months ended December 31, 2018. The change of $0.4 million was primarily due to the increase in interest rates and borrowings under the loan from Oxford entered into during the nine months ended December 31, 2019, as compared to the SVB loan interest rates and borrowings outstanding during the nine months ended December 31, 2018.

Comparison of the Years Ended March 31, 2019 and 2018

The following table summarizes Tarveda's results of operations for the years ended March 31, 2019 and 2018 (in thousands):

	Year Ended March 31,		
	2019	2018	Change
Operating expenses:			
Research and development	$ 16,685	$ 14,199	$ 2,486
General and administrative	4,847	4,346	501
Total operating expenses	21,532	18,545	2,987
Loss from operations	(21,532)	(18,545)	(2,987)
Other (expense) income:			
Interest expense, net	(447)	(501)	54
Loss on extinguishment of debt	(403)	(277)	(126)
Change in fair value of warrant liabilities	21	12	9
Other income, net	267	300	(33)
Total other expense, net:	(562)	(466)	(96)
Net loss	$ (22,094)	$ (19,011)	$ (3,083)

Research and Development Expenses

	Year Ended March 31, 2019	2018	Change
Direct research and development expenses by product candidate:			
PEN-866	$ 2,468	$ 1,733	$ 735
PEN-221	4,118	3,033	1,085
Discovery	937	805	132
Unallocated research and development expenses:			
Personnel-related (including stock-based compensation)	5,936	4,965	971
Other	3,226	3,663	(437)
Total research and development expenses	$ 16,685	$ 14,199	$2,486

Research and development expenses were $16.7 million for the year ended March 31, 2019, compared to $14.2 million for the year ended March 31, 2018. The increase of $2.5 million was primarily due to a net increase of $0.5 million in unallocated research and development costs, and an increase of $1.8 million in external costs related to Tarveda's clinical trials for its two product candidates.

Direct expenses of Tarveda's PEN-866 product candidate increased by $0.7 million in the year ended March 31, 2019, compared to the year ended March 31, 2018. The increase was primarily due to a $0.5 million increase in clinical trial expense due to the progression of the Phase 1 clinical trial. The remaining $0.2 million increase was the result of manufacturing expense to support the PEN-866 clinical trial and increased external research and development expense related to PEN-866. Tarveda expects that its research and development expenses for PEN-866 will increase over the next several years as it plans to advance PEN-866's clinical stage activities.

Direct expenses of Tarveda's PEN-221 product candidate increased by $1.1 million in the year ended March 31, 2019, compared to the year ended March 31, 2018. The increase was primarily due to an increase of $0.8 million in costs associated with the raw materials and manufacturing expenses necessary to produce drug product and drug substance to support the PEN-221 clinical trial. The remaining $0.3 million increase is primarily the result of increased clinical trial expense due to the progression of the Phase 2a clinical trial. Tarveda expects that its research and development expenses for PEN-221 will increase substantially over the next several years as it expects to progress through its clinical trials in patients.

Discovery expenses are expenses incurred in the research and discovery of potential new product candidates. This amount increased slightly year over year due to Tarveda's continued research activities.

Unallocated research and development expenses were $9.2 million for the year ended March 31, 2019, compared to $8.6 million for the year ended March 31, 2018. The increase of $0.6 million was due to an increase of $1.0 million in personnel-related costs, partially offset by a decrease of $0.4 million in other costs. The increase in personnel-related costs was primarily due to the hiring of additional personnel in Tarveda's research and development functions. Personnel-related costs for each of the years ended March 31, 2019 and 2018 included stock-based compensation of $0.2 million. The decrease in other costs was primarily due to a $0.5 million decrease in licensing fees.

General and Administrative Expenses

General and administrative expenses were $4.8 million for the year ended March 31, 2019, compared to $4.3 million for the year ended March 31, 2018. The increase of $0.5 million was primarily due to a $0.3 million increase in personnel-related expenses, a $0.1 million increase in information systems support and a $0.1 million increase in software expense. Personnel-related expenses increased primarily due to the hiring of additional

personnel in Tarveda's general and administrative functions. Personnel-related costs for the years ended March 31, 2019 and 2018 included stock-based compensation of $0.4 million and $0.3 million, respectively. The increase in information systems support and software expense are due to the improvement of computer and information systems, as well as increased ongoing technical support for Tarveda's growing operations.

Other Income (Expense)

Other expense was $0.6 million during the year ended March 31, 2019, and remained relatively flat compared to $0.5 million in other expense for the year ended March 31, 2018. The slight increase is related to Tarveda's increased loss on extinguishment of debt in connection with its debt refinancing transaction in January 2019 compared to the loss on extinguishment in 2018.

Liquidity and Capital Resources

Sources of Liquidity

Since its inception, Tarveda has not generated revenue from any sources and has incurred significant operating losses and negative cash flows from its operations. Tarveda has funded its operations to date primarily with proceeds from sales of preferred stock totaling $121.4 million, including $13.6 million from the most recent sale of Series 1 Preferred Stock in December 2019. Tarveda has also funded operations using borrowings under loan and security agreements.

Cash Flows

The following table summarizes Tarveda's sources and uses of cash for each of the periods presented (in thousands):

	Years Ended March 31,		Nine Months Ended December 31,	
	2019	2018	2019	2018
			(unaudited)	
Net cash used in operating activities	$(21,755)	$(17,871)	$(13,389)	$(15,436)
Net cash provided by (used in) investing activities	8,822	(9,137)	(69)	8,785
Net cash provided by financing activities	16,806	166	13,489	74
Net increase (decrease) in cash, cash equivalents, and restricted cash	$ 3,873	$(26,842)	$ 31	$ (6,577)

Net Cash Used in Operating Activities

During the year ended March 31, 2019, operating activities used $21.8 million of cash, primarily resulting from Tarveda's net loss of $22.1 million and net cash used in changes in Tarveda's operating assets and liabilities of $1.0 million, partially offset by net non-cash gains of $1.4 million. Net cash used in changes in Tarveda's operating assets and liabilities for the year ended March 31, 2019 consisted of a $1.2 million increase in prepaid expenses and other current assets, and a $0.3 million decrease in accrued expenses and other current liabilities, partially offset by a $0.5 million increase in accounts payable. The increase in prepaid expenses and other current assets was primarily due to the prepayment of drug manufacturing expenses while the decrease in accrued expenses was primarily due to the timing of expenses related to Tarveda's clinical trials and external research and development efforts. The increase in accounts payable was primarily due to the timing of vendor invoicing and payments.

During the year ended March 31, 2018, operating activities used $17.9 million of cash, resulting from Tarveda's net loss of $19.0 million, partially offset by net non-cash gains of $1.3 million and net cash used in

changes in Tarveda's operating assets and liabilities of $0.2 million. Net cash used in changes in Tarveda's operating assets and liabilities for the year ended March 31, 2018 consisted of a $0.6 million decrease in accrued expenses and other current liabilities, partially offset by an increase of $0.4 million in accounts payable. The decrease in accrued expenses was primarily due to the timing of invoicing and payment for clinical trial expenses, legal fees and external research and development. The increase in accounts payable was primarily due to the timing of vendor invoicing and payments.

During the nine months ended December 31, 2019, operating activities used $13.4 million of cash, resulting from Tarveda's net loss of $16.3 million, partially offset by non-cash gains of $0.8 million and net cash provided by changes in Tarveda's operating assets and liabilities of $2.1 million. Net cash provided by changes in Tarveda's operating assets and liabilities for the nine months ended December 31, 2019 consisted of an operating right-of-use asset of $0.5 million due to the adoption of ASC 842, which was offset by a corresponding operating lease liability of $0.3 million, and a $0.7 million decrease in prepaid expenses and other current assets, a $2.8 million increase in accrued expenses and a $0.7 million increase in accounts payable. The decrease in prepaid expenses and other current assets was primarily due to the expensing of prepaid amounts paid to CROs for clinical trial activities. The increase in accrued expenses was primarily the result of higher accrued compensation and benefits due to the timing of bonus payments. The increase in accounts payable was primarily due to the timing of vendor invoicing and payments.

During the nine months ended December 31, 2018, operating activities used $15.4 million of cash resulting from Tarveda's net loss of $16.5 million, offset by non-cash gains of $0.7 million and net cash provided by changes in Tarveda's operating assets and liabilities of $0.4 million. Net cash provided by changes in Tarveda's operating assets and liabilities for the nine months ended December 31, 2018 consisted of a $0.9 million increase in accrued expenses, and a $0.3 million increase in accounts payable, partially offset by a $0.7 million increase in prepaid expenses and other current assets. The increase in accrued expenses was primarily due to the timing of drug manufactures and higher accrued compensation and benefits, primarily relating to the timing of bonus payments. The increase in prepaid expenses and other current assets was primarily due to the prepayment of drug manufacturing expenses as well as clinical trial expenses. The increase in accounts payable was primarily due to the timing of vendor invoicing and payments.

Net Cash Provided by (Used in) Investing Activities

During the year ended March 31, 2019, net cash provided by investing activities was $8.8 million, primarily related to the sale and maturity of available-for-sale securities, partially offset by the purchases of available-for-sale securities.

During the year ended March 31, 2018, net cash used in investing activities was $9.1 million, consisting of purchases of available-for-sales securities and property and equipment, offset by the sale and maturity of available-for-sale securities.

During the nine months ended December 31, 2019, net cash used in investing activities was $0.1 million, consisting of purchases of property and equipment.

During the nine months ended December 31, 2018, net cash provided by investing activities was $8.8 million, primarily related to the sale and maturity of available-for-sale securities, partially offset by the purchases of available-for-sale securities, and property and equipment.

Net Cash Provided by Financing Activities

Net cash provided by financing activities for the years ended March 31, 2019 and 2018 was $16.8 million and $0.2 million, respectively, the increase is resulting primarily from the issuance of preferred stock, net of issuance costs, and $1.8 million of debt proceeds, net from the debt refinancing in 2019. Tarveda issued 13,622,996 million shares of Series D preferred stock at $1.10108 per share in January 2019.

Net cash provided by financing activities for the nine months ended December 31, 2019 and 2018 was approximately $13.5 million and $0.1 million, respectively. The increase for the nine months ended December 31, 2019 was primarily related to proceeds from the issuance of Series 1 Preferred, net of issuance costs.

Description of Indebtedness

Loan and Security Agreement with Oxford

On March 29, 2019, Tarveda entered into a $10.0 million loan and security agreement with, Oxford (the "2019 Oxford Loan"). Tarveda used proceeds from the 2019 Oxford Loan to repay all outstanding borrowings to SVB under a loan, which was $7.5 million. In connection with the repayment of the loan from SVB, Tarveda recorded a loss on extinguishment of $0.4 million.

In connection with the 2019 Oxford Loan, Tarveda issued the lender warrants to purchase 136,230 shares of Tarveda's Series D convertible redeemable preferred stock at an exercise price of $1.10108 per share. These warrants were exchanged for warrants to acquire 136,230 shares of Tarveda's Series 1 redeemable convertible preferred stock in December 2019.

Under the terms of the 2019 Oxford Loan, Tarveda is required to make 36 installments of principal and interest commencing on April 1, 2021. Principal payments will be $2.0 million in the year ended March 31, 2022, and $4.0 million in the year ended March 31, 2023 and $4.5 million in the year ended March 31, 2024.

Tarveda has the right to borrow up to an additional $5.0 million and extend the maturity date of the loan upon the achievement of certain milestones. Upon the borrowing of the additional $5.0 million, if at all, the lender is entitled to receive warrants to purchase an additional 68,114 shares of Tarveda's Series 1 redeemable convertible preferred stock at an exercise price of $1.10108 per share. Tarveda expects to achieve the certain milestones required to drawn down the additional $5.0 million within the next fiscal year.

Tarveda is required to make interest-only payments from April 1, 2019 through April 1, 2021. Interest accrues at a floating per annum rate equal to the greater of (i) eight percent (8.0%) and (ii) the sum of the 30-day U.S. LIBOR rate and the interest rate floor of five and a half percent (5.5%).

The 2019 Oxford Loan is secured by substantially all of Tarveda's assets, including its intellectual property. The credit facility includes affirmative and negative covenants applicable to Tarveda. The affirmative covenants include, among other things, covenants requiring Tarveda to maintain its legal existence and governmental approvals, deliver certain financial reports, maintain insurance coverage and satisfy certain requirements regarding deposit accounts. Further, subject to certain exceptions, the credit facility contains customary negative covenants limiting Tarveda's ability to, among other things, transfer or sell certain assets, allow changes in business, ownership or business locations, consummate mergers (such as the Merger) or acquisitions, incur additional indebtedness, create liens, pay dividends or make other distributions and make investments. While Oxford consented to the entry into the merger agreement, Tarveda does not yet have Oxford's consent to the consummation of the Merger. Tarveda expects to obtain such consent once a closing date has been established.

Upon the occurrence and during the continuance of an event of default, Oxford may declare all outstanding principal and accrued and unpaid interest under the 2019 Oxford Loan immediately due and payable and exercise the other rights and remedies provided for under the related loan and security documents. The events of default under the credit facility include, among other things, payment defaults, breaches of covenants or representations and warranties, material adverse changes, certain bankruptcy events, cross defaults with certain other indebtedness and judgment defaults.

At its option, Tarveda is entitled to prepay all, but not less than all, of the outstanding borrowings, subject to a prepayment premium ranging from 1.0% to 3.0% of the principal amount outstanding as of the date of repayment. Tarveda is also subject to a final payment fee of 5.0%.

As of March 31, 2019, the carrying value of the borrowings under the 2019 Oxford Loan amounted to $9.8 million. There were no borrowings under this loan as of March 31, 2018.

Funding Requirements

Tarveda expects its expenses to increase substantially in connection with its ongoing activities, particularly as it advances the preclinical activities and clinical trials of its product candidates in development. In addition, upon the closing of the Merger, Tarveda expects to incur additional costs associated with operating as a public company. The timing and amount of Tarveda's operating expenditures will depend largely on:

- the scope, number, initiation, progress, timing, costs, design, duration, any potential delays and results of clinical trials and nonclinical studies for Tarveda's current or future product candidates, particularly relating to its HSP90 miniature drug conjugate platform, including PEN-866, and relating to its PEN-221candidate;
- the clinical development plans Tarveda establishes for these product candidates;
- the number and characteristics of product candidates and programs that Tarveda develops or may in-license;
- the outcome, timing and cost of regulatory reviews, approvals or other actions to meet regulatory requirements established by the FDA and comparable foreign regulatory authorities, including the potential for the FDA or comparable foreign regulatory authorities to require that Tarveda perform more studies for its product candidates than those that Tarveda currently expects;
- Tarveda's ability to obtain marketing approval for its product candidates;
- the cost of filing, prosecuting, defending and enforcing Tarveda's patent claims and other intellectual property rights covering its product candidates;
- Tarveda's ability to maintain, expand and defend the scope of its intellectual property portfolio, including the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against Tarveda or its product candidates;
- the cost and timing of completion of commercial-scale outsourced manufacturing activities with respect to Tarveda's product candidates;
- Tarveda's ability to establish and maintain licensing, collaboration or similar arrangements on favorable terms and whether and to what extent Tarveda retains development or commercialization responsibilities under any new licensing, collaboration or similar arrangement;
- the cost of establishing sales, marketing and distribution capabilities for any product candidates for which Tarveda may receive regulatory approval in regions where Tarveda chooses to commercialize its products on its own;
- the success of any other business, product or technology that Tarveda acquires or in which Tarveda invests;
- the costs of acquiring, licensing or investing in businesses, product candidates and technologies;
- Tarveda's need and ability to hire additional management and scientific and medical personnel;
- the costs to operate as a public company in the U.S. including the need to implement additional financial and reporting systems and other internal systems and infrastructure for Tarveda's business;

- market acceptance of Tarveda's product candidates, to the extent any are approved for commercial sale; and
- the effect of competing technological and market developments.

Tarveda expects that its existing cash and cash equivalents will be sufficient to fund its operating expenses, capital expenditure requirements and debt service payments through September 2020. Tarveda has based this estimate on assumptions that may prove to be wrong, and Tarveda could exhaust its available capital resources sooner than it expects.

Until such time, if ever, as Tarveda can generate substantial product revenue, Tarveda expects to finance its cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances, and marketing, distribution or licensing arrangements with third parties. To the extent that Tarveda raises additional capital through the sale of equity or convertible debt securities, the ownership interest of Tarveda may be materially diluted, and the terms of such securities could include liquidation or other preferences that adversely affect the rights of the Tarveda Stockholders and the rights of the stockholders of the combined organization following the closing of the Merger. Debt financing and preferred equity financing, if available, may involve agreements that include restrictive covenants that limit Tarveda's ability to take specified actions, such as incurring additional debt, making capital expenditures or declaring dividends. If Tarveda raises funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, Tarveda may have to relinquish valuable rights to its technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to Tarveda. If Tarveda is unable to raise additional funds through equity or debt financings or other arrangements when needed, Tarveda may be required to delay, reduce or eliminate its product development or future commercialization efforts, or grant rights to develop and market product candidates that Tarveda would otherwise prefer to develop and market themselves.

Contractual Obligations

Tarveda has various contractual obligations, which are recorded as liabilities in its financial statements. Other than noted below, there were no other material changes to Tarveda's contractual obligations.

The following table summarizes Tarveda's significant contractual obligations by period presented according to the payment due date as of March 31, 2019 (in thousands):

	Payments Due By Period				
	Total	Less than 1 Year	1 to 3 Years	4 to 5 Years	More than 5 Years
Debt obligations	$10,500	$ —	$ 2,000	$ 8,500	$ —
Operating lease commitments	565	565	—	—	—
Total	$11,065	$ 565	$ 2,000	$ 8,500	$ —

In May 2019, Tarveda signed an amendment to the lease agreement, extending the term for an additional three years through January 31, 2023, with an option to extend another three years to January 31, 2026. The future contractual commitment under this amendment totals $2.9 million.

In September 2016, Tarveda entered into a license agreement for the discovery, development and commercialization of certain drug product candidates from Madrigal Pharmaceuticals, Inc. Under such agreement Tarveda is required to make certain milestone payments which could aggregate up to $249.4 million when and if achieved. In addition, Tarveda is required to pay the third party certain variable royalties not to exceed a single digit percentage annually on any commercial sales involving all products commercialized under the agreement. Tarveda accrues for the milestone payments only once they are deemed probable of achievement.

Except as disclosed above, Tarveda has no capital leases and no material non-cancelable purchase commitments with service providers, as Tarveda has generally contracted on a cancelable, purchase-order basis.

Tarveda enters into contracts in the normal course of business with CROs, CMOs and other third parties for clinical trials, preclinical research studies and testing and manufacturing services. These contracts are cancelable by Tarveda upon prior notice. Payments due upon cancellation consist only of payments for services provided or expenses incurred, including noncancelable obligations of Tarveda's service providers, up to the date of cancellation. These payments are not included in the preceding table as the amount and timing of such payments are not known.

Critical Accounting Policies and Estimates

Tarveda's financial statements are prepared in accordance with GAAP in the U.S. The preparation of Tarveda's financial statements and related disclosures requires Tarveda to make judgments and estimates that affect the reported amounts of assets, liabilities, costs and expenses, and the disclosure of contingent assets and liabilities in its financial statements. Tarveda bases its estimates on historical experience, known trends and events and various other factors that Tarveda believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Tarveda evaluates its estimates and assumptions on an ongoing basis. Tarveda's actual results may differ from these estimates under different assumptions or conditions.

While Tarveda's accounting policies are described in more detail in Note 2 to its annual financial statements appearing elsewhere in this proxy statement/prospectus/information statement, Tarveda believes the following accounting policies require the most significant judgments and estimates used in the preparation of its financial statements.

Research and Development

As part of the process of preparing its financial statements, Tarveda is required to estimate its accrued research and development expenses. This process involves reviewing open contracts and purchase orders, communicating with its applicable personnel to identify services that have been performed on Tarveda's behalf and estimating the level of service performed and the associated cost incurred for the service when Tarveda has not yet been invoiced or otherwise notified of actual costs. The majority of Tarveda's service providers invoice Tarveda in arrears for services performed, on a pre-determined schedule or when contractual milestones are met; however, some require advance payments. Tarveda makes estimates of its accrued expenses as of each balance sheet date in the financial statements based on facts and circumstances known to them at that time. Tarveda periodically confirms the accuracy of these estimates with the service providers and makes adjustments, if necessary. Examples of estimated accrued research and development expenses include fees paid to:

- vendors in connection with clinical and preclinical development activities;
- CROs and investigative sites in connection with clinical trials; and
- CMOs in connection with the production of preclinical and clinical trial materials.

Tarveda bases the expense recorded related to external research and development on its estimates of the services received and efforts expended pursuant to quotes and contracts with multiple CMOs, CROs and other vendors that supply, conduct and manage preclinical studies and clinical trials on its behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to Tarveda's vendors will exceed the level of services provided and result in a prepayment of the expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, Tarveda estimates the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, Tarveda adjusts the accrual or the amount of prepaid expenses accordingly. Although Tarveda does not expect its estimates to be materially different from amounts actually incurred, Tarveda's understanding of the

status and timing of services performed relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low in any particular period. To date, there have not been any material adjustments to Tarveda's prior estimates of accrued research and development expenses.

Stock-Based Compensation

Tarveda measures all stock-based awards on the fair value on the date of the grant and recognizes compensation expense for those awards over the requisite service period, which is generally the vesting period of the respective award. Tarveda has issued stock-based awards with only service-based vesting conditions and records the expense for these awards using the straight-line method. Tarveda determines the fair value of restricted stock awards using the fair value of its common stock less any applicable purchase price.

Prior to the adoption of ASU 2016-09, *(Topic 718) Compensation—Stock Compensation* ("ASU 2016-09") on April 1, 2018, Tarveda recognized compensation expense for only the portion of awards that were expected to vest by estimating a forfeiture rate that was applied. In developing a forfeiture rate estimate, Tarveda considered its historical experience to estimate pre-vesting forfeitures for service-based awards. The impact of a forfeiture rate adjustment would be recognized in full in the period of adjustment, and if the actual forfeiture rate was materially different from the Tarveda's estimate. Post adoption of ASU 2016-09, Tarveda accounts for forfeitures as they occur.

Prior to the adoption of ASU 2018-07, *(Topic 718) Compensation—Stock Compensation* ("ASU 2018-07") on April 1, 2018, Tarveda accounted for stock-based awards granted to non-employee consultants by recognizing expense based on re-measuring the fair value of the awards until the service completion date using the then-current fair value of Tarveda's common stock and updated assumption inputs in the Black-Scholes option-pricing model. Post adoption, Tarveda treats non-employee awards the same as employee awards, accounting for the grant date fair value and does not remeasure the fair value in subsequent periods.

The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model, which uses as assumption inputs: the fair value of Tarveda's common stock, calculation of volatility of Tarveda common stock using historical benchmarking to peer companies, the expected term of its stock options, the risk-free interest rate for a period that approximates the expected term of its stock options and its expected dividend yield.

Determination of the Fair Value of Common Stock and Preferred Stock

As there has been no public market for Tarveda's common stock to date, the estimated fair value of its common stock has been determined by its board of directors as of the date of each award grant, with input from management, considering its most recently available third-party valuations of common stock and its board of directors' assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant. These third-party valuations were performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. Tarveda's common stock valuations were prepared using either an option pricing method ("OPM"), or a hybrid method, both of which used market approaches to estimate its enterprise value. In addition to considering the results of these third-party valuations, Tarveda's board of directors considered various objective and subjective factors to determine the fair value of the Tarveda common stock as of each grant date, including:

- the prices at which Tarveda sold Tarveda preferred stock and the superior rights and preferences of the Tarveda preferred stock relative to the Tarveda common stock at the time of each grant;
- the progress of Tarveda's research and development programs, including the status of preclinical studies and planned clinical trials for its product candidates;

- Tarveda's stage of development and commercialization and its business strategy;
- external market conditions affecting the biopharmaceutical industry, and trends within the biopharmaceutical industry;
- Tarveda's financial position, including cash on hand, and its historical and forecasted performance and operating results;
- the lack of an active public market for the Tarveda common stock and Tarveda preferred stock;
- the likelihood of achieving a liquidity event, such as an IPO, merger consolidation or a sale of Tarveda in light of prevailing market conditions; and
- the analysis of IPOs and the market performance of similar companies in the biopharmaceutical industry.

The assumptions underlying these valuations represented the management of Tarveda's best estimates, which involved inherent uncertainties and the application of management's judgment. As a result, if Tarveda had used significantly different assumptions or estimates, the fair value of the Tarveda common stock and Tarveda's stock-based compensation expense could be materially different.

Following the closing of the Merger, there is no intent to grant equity awards linked to Tarveda's common stock. Accordingly, it will no longer be necessary for Tarveda's board of directors to estimate the fair value of Tarveda's common stock.

Options Granted

The following table sets forth by grant date, the number of shares underlying stock options granted and the per share exercise price of stock options granted between March 31, 2018 and December 31, 2019. Tarveda did not grant any shares of restricted common stock during this period.

Grant Date	Type of Award	Number of Shares Subject to Options Granted	Per Share Exercise Price of Options	Per Share Estimated Fair Value of Options	Fair Value Per Common Share on Grant Date
June 13, 2018	Options	395,000	$ 0.34	$ 0.18	$ 0.34
September 26, 2018	Options	1,588,815	$ 0.39	$ 0.20	$ 0.39
November 15, 2018	Options	35,000	$ 0.39	$ 0.20	$ 0.39
February 13, 2019	Options	2,358,100	$ 0.37	$ 0.18	$ 0.37
May 8, 2019	Options	40,000	$ 0.37	$ 0.18	$ 0.37
September 19, 2019	Options	347,592	$ 0.37	$ 0.17	$ 0.37

Valuation of Preferred Stock Warrant Liability

In connection with Tarveda's SVB and Oxford debt agreements and preferred stock financings in 2016, Tarveda issued warrants to purchase shares of Tarveda preferred stock. These warrants are freestanding financial instruments and are liability classified. The warrant liability was initially recorded at fair value based upon the fair value of each warrant on its respective issuance date and is subsequently remeasured to fair value at each reporting date. Changes in the fair value of the warrant liability are recognized as a component of other income (expense) in Tarveda's statement of operations and comprehensive loss. Tarveda will continue to recognize changes in the fair value of the warrant liability until each respective warrant is exercised, expires or qualifies for equity classification.

Tarveda uses the Black-Scholes option-pricing model to value the preferred stock warrants. Tarveda assesses these assumptions and estimates on a quarterly basis as additional information impacting the assumptions is obtained. Estimates and assumptions impacting the fair value measurement include the fair value per share of the underlying shares of Tarveda's preferred stock, risk-free interest rate, expected dividend yield,

expected volatility of the price of the underlying preferred stock and the remaining contractual term of the warrants. The most significant assumption impacting the fair value of the preferred stock warrants is the fair value of Tarveda's preferred stock as of each remeasurement date. Tarveda determines the fair value per share of the underlying Tarveda preferred stock by taking into consideration the most recent issuances of Tarveda preferred stock, results obtained from third-party valuations and additional factors that are deemed relevant. The fair value per share of the preferred stock as of March 31, 2019 and 2018 are outlined in the table below. As of December 31, 2019, Series 1 Preferred was the only preferred stock outstanding and had a fair value per share of $1.68.

	As of	
	March 31, 2019	March 31, 2018
Series A Preferred Stock	$ 2.59	$ 2.23
Series B Preferred Stock	$ 4.03	$ 3.46
Series B-1 Preferred Stock	$ 2.69	$ 2.21
Series C Preferred Stock	$ 1.10	$ 1.06
Series D Preferred Stock	$ 1.12	$ 1.10

Tarveda has historically been a private company and lacks company-specific historical and implied volatility information of Tarveda capital stock. Therefore, Tarveda estimates its expected stock volatility based on the historical volatility of publicly traded peer companies for a term equal to the estimated remaining term of the warrants. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the estimated remaining term of the warrants. Tarveda estimated a 0% expected dividend yield based on the fact that Tarveda has never paid or declared dividends and does not intend to do so in the foreseeable future.

In December 2019, all outstanding warrants to acquire Tarveda preferred stock (other than the Oxford Series D Warrants) became exercisable for the same number of shares of Tarveda common stock. In addition, the outstanding Oxford Series D Warrants became exercisable for the same number of shares of Series 1 Preferred Stock. Upon the closing of the Merger, pursuant to the Merger Agreement, all of Tarveda's outstanding warrants will be converted into and become warrants to purchase shares of Organovo common stock and become exercisable for Organovo's common stock.

Off-Balance Sheet Arrangements

Tarveda did not have, during the periods presented, and Tarveda does not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that my potentially impact Tarveda's financial position and results of operations is disclosed in Note 2 to Tarveda's annual and interim financial statements appearing elsewhere in this proxy statement/prospectus/information statement.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT THE MARKET RISK OF TARVEDA

Interest Rate Risk

As of March 31, 2019 and December 31, 2019, Tarveda had $10.0 million of borrowings outstanding under the 2019 Oxford Loan. Borrowings under the agreement bear interest at a floating per annum rate equal to the greater of (i) eight percent (8.0%) and (ii) the sum of the 30-day U.S. LIBOR rate and the interest rate floor of five and a half percent (5.5%).

As of March 31, 2018 and December 31, 2018, the interest rate applicable to borrowings under Tarveda's loan from SVB was a floating per annum rate equal to the greater of (i) zero percent (0.0%) or (ii) the Wall Street Journal prime rate, which is the lowest rate of interest used federally and is based on the overnight rate that banks use to lend to one another, minus one-quarter of one percent (0.25%). The SVB loan also required the payment of an exit fee of 7.0% due on the loan maturity date, which Tarveda accrued over the term of the SVB Loan as interest expense in the statements of operations and comprehensive loss.

In March 2019, in connection with entering into the 2019 Oxford Loan, all amounts due under the loan from SVB were repaid with proceeds from the 2019 Oxford Loan and the SVB loan was terminated. See "*— Liquidity and Capital Resources — Description of Indebtedness*" for further details.

As of March 31, 2019 and December 31, 2019, Tarveda had cash equivalents consisting of a money market fund invested in U.S. Treasury securities. Interest income is sensitive to changes in the general level of interest rates; however, due to the short-term nature of these investments, an immediate 10% change in the interest rates would not have a material impact on Tarveda's financial position or results of operations.

Capital Market Risk

Tarveda currently has no product revenues and depends on funds raised through other sources. One possible source of funding is through equity offerings. Following the Merger, Tarveda's ability to raise funds in this manner depends upon capital market forces affecting the combined organization's stock price.

MANAGEMENT FOLLOWING THE MERGER

Executive Officers and Directors

Resignation of Current Executive Officers of Organovo

Pursuant to the Merger Agreement, all of the current executive officers of Organovo will resign immediately prior to the completion of the Merger.

Executive Officers and Directors of the Combined Organization Following the Merger

Pursuant to the Merger Agreement, all of the directors of Organovo who are not continuing as directors will resign at or prior to the Effective Time. Prior to the Effective Time, the Organovo board of directors will elect six designees selected by Tarveda to serve as members of the Organovo board of directors effective upon consummation of the Merger; two designees of Organovo will continue to serve as members of the Organovo board of directors effective upon consummation of the Merger. A majority of the members of the board of directors are expected to satisfy the requisite independence requirements for the Organovo board of directors, as well as the sophistication and independence requirements for the required committees pursuant to Nasdaq listing requirements. It is currently anticipated that the Tarveda designees will be Andrew Fromkin, Dennis Ausiello, Nilesh Kumar, Guido Magni, Michael Metzger and Aymeric Sallin, and the Organovo designees will be Carolyn Beaver and Mark Kessel.

Following the Merger, the management team of Organovo is expected to be composed of the management team of Tarveda. The following table lists the names and ages as of January 31, 2020 and positions of the individuals who are currently expected to serve as executive officers and directors of Organovo upon the completion of the Merger:

Name	Age	Position(s)
Executive Officers		
Andrew J. Fromkin	53	President, Chief Executive Officer and Chairman
Jeffrey D. Bloss, M.D.	63	Chief Medical Officer
Brian K. Roberts	48	Chief Financial Officer
Mark T. Bilodeau, Ph.D.	53	Chief Scientific Officer
Sudhakar Kadiyala, Ph.D.	54	Executive Vice President, Strategy
Non-Employee Directors		
Dennis Ausiello, M.D.	74	Director
Carolyn Beaver	62	Director
Mark Kessel	78	Director
Nilesh Kumar, Ph.D.	44	Director
Guido Magni, M.D., Ph.D.	66	Director
Michael Metzger	48	Director
Aymeric Sallin, M.S.	46	Director

Executive Officers

Andrew J. Fromkin has served as Tarveda's President, Chief Executive Officer and Chairman since January 2016 when Tarveda was formed from a predecessor company called Blend Therapeutics, Inc., for which Mr. Fromkin served as President, Chief Executive Officer and Chairman from March 2015 until January 2016. Prior thereto, Mr. Fromkin worked as an independent consultant and advisor to a variety of healthcare businesses and investors beginning in April 2011. From 2005 until 2011, Mr. Fromkin served in various roles for Clinical Data, Inc., a Nasdaq-listed biopharmaceutical and personalized medicine company, including as Executive Vice President, President, Chief Executive Officer and Director. Prior to Clinical Data, Mr. Fromkin served as

President and Chief Executive Officer of DoctorQuality, Inc., President, Chief Executive Officer and Director of Endo Surgical Devices, Inc. and Corporate Vice President, Business Development, for Merck-Medco, a wholly-owned subsidiary of Merck & Co. Mr. Fromkin began his career at Health Information Technologies, Inc. as Director of Marketing and Payer Alliances for the parent company. From 2014 to 2016, Mr. Fromkin served on the board of directors of Regado Biosciences, Inc., which became Tobira Therapeutics, Inc., a Nasdaq-listed biopharmaceutical company, in 2015. Mr. Fromkin currently serves on the boards of Xoc Pharmaceuticals and Immunovant, two privately held companies. Mr. Fromkin received a B.A. degree from Brandeis University. Tarveda believes Mr. Fromkin's extensive industry knowledge and experience as a chief executive officer qualifies him to serve on its board of directors.

Jeffrey D. Bloss, M.D., has served as Tarveda's Chief Medical Officer since August 2018. Prior to joining Tarveda, Dr. Bloss served as Chief Medical Officer and Senior Vice President, Medical Affairs at Aegerion Pharmaceuticals from June 2017 to August 2018. Prior to that, Dr. Bloss served as Senior Vice President at Astellas Pharma Inc. from October 2012 to June 2017. Dr. Bloss has also held senior level positions at various global healthcare companies. Dr. Bloss received a B.S. degree from Juniata College and a M.D. from Thomas Jefferson University Medical College. Dr. Bloss completed his Residency in Obstetrics & Gynecology at Wilford Hall USAF Medical Center and his Fellowship in Gynecologic Oncology at the University of California, Irvine.

Brian K. Roberts has served as Tarveda's Chief Financial Officer since January 2018. From November 2016 through December 2017, Mr. Roberts worked as an independent consultant and advisor to various life sciences businesses. From January 2015 to October 2016, Mr. Roberts served as Chief Financial and Operating Officer at Avedro, Inc., a privately held biotechnology company. Prior to that, from January 2009 to December 2014, he served as Chief Financial Officer at Insulet Corporation, a Nasdaq-listed medical device company. Since December 2015, Mr. Roberts has served as a member of the board of directors and chair of the audit committee of ViewRay, Inc., a Nasdaq-listed medical technology company, and since July 2016, he has served as a member of the board of directors and chair of the audit committee of Valeritas Holdings, Inc., a Nasdaq-listed medical technology company. Mr. Roberts received a B.S. degree in Accounting and Finance from Boston College.

Mark T. Bilodeau, Ph.D., has served as Tarveda's Chief Scientific Officer since May 2019 and previously served as Executive Vice President, Drug Discovery from January 2016 to May 2018, when Tarveda was formed from a predecessor company called Blend Therapeutics, Inc., for which Dr. Bilodeau served as Executive Vice President, Drug Discovery from April 2012 until January 2016. Prior thereto, Dr. Bilodeau was Senior Director of Medicinal Chemistry at Merck & Co. Inc., where he was employed from 1995 to 2011 and where he developed a broad background in drug discovery in the oncology, pain, neuroscience, ophthalmology, and cardiovascular therapeutic areas. Dr. Bilodeau received a B.S. in Chemistry from Boston College and a Ph.D. in Organic Chemistry from Harvard University. Dr. Bilodeau conducted postdoctoral studies at the Memorial Sloan-Kettering Cancer Center.

Sudhakar Kadiyala, Ph.D., has served as Tarveda's Executive Vice President, Strategy since April 2018 and as Senior Vice President, Strategy since January 2016 when Tarveda was formed from a predecessor company called Blend Therapeutics, Inc., for which Dr. Kadiyala served as Senior Vice President from July 2015 until January 2016. Prior thereto, from July 2012 through July 2015, Dr. Kadiyala acted as an independent consultant and advisor to a number of life sciences companies, including Blend Therapeutics, Inc. beginning in November 2012. Prior to his consulting business, Dr. Kadiyala worked at Advanced Technologies and Regenerative Medicine, LLC, a Johnson & Johnson company, as Senior Director of Business Development & Strategic Planning from 2008 to July 2012 and concurrently from July 2010 to July 2012 as Senior Director of Process and Product Development. Dr. Kadiyala received a B. Technology from Indian Institute of Technology, Bombay, a M.E. in Engineering from Thayer School of Engineering at Dartmouth College and a Ph.D. in Biomedical Engineering from the Johns Hopkins University School of Medicine.

Non-employee Directors

Dennis Ausiello, M.D., has served as a member of Tarveda's board of directors since January 2016 when Tarveda was formed from a predecessor company called Blend Therapeutics, Inc., and for which Dr. Ausiello served on its board from November 2014 to January 2016. Since April 2013, Dr. Ausiello has served as the Director of the Center for Assessment Technology and Continuous Health (CATCH) at Massachusetts General Hospital. Prior to that, from September 1996 to April 2013, Dr. Ausiello served as the Chairman of Medicine at Massachusetts General Hospital. Dr. Ausiello currently serves on the boards of directors of Alnylam Pharmaceuticals, Inc., since April 2012, and Seres Therapeutics, Inc., since April 2015, each a Nasdaq-listed biopharmaceutical company. From December 2006 to April 2018, he served on the board of directors of Pfizer Inc. Dr. Ausiello received his undergraduate degree from Harvard College and a M.D. from the University of Pennsylvania. Tarveda believes Dr. Ausiello's extensive experience as a physician and as a director of numerous public biopharmaceutical companies qualifies him to serve on its board of directors and that of the combined organization.

Carolyn Beaver joined the Organovo board of directors in February 2019 and has over 30 years of audit and financial management experience. She previously held several positions at Sequenom Inc., a life sciences testing company, including Chief Financial Officer and Senior Vice President from March 2015 to October 2016, Chief Financial Officer from June 2014 to March 2015 and Vice President and Chief Accounting Officer from June 2012 to March 2015. Ms. Beaver was previously Corporate Vice President and Controller of Beckman Coulter, Inc., a biomedical laboratory instrument and test company, from August 2005 until June 2012, and was named Chief Accounting Officer in October 2005, a position she held until July 2011, following the acquisition of Beckman Coulter, Inc. by Danaher Corporation. She also served as interim Chief Financial Officer of Beckman Coulter from July 2006 through October 2006. Ms. Beaver was a director of Commerce National Bank, chair of its audit committee and a member of its asset/liability committee from 2005 until the bank was acquired in 2013. Ms. Beaver served as an audit partner with KPMG LLP from 1987 to 2002. She was named a director and member of the audit committee of MaxLinear, Inc., a high-performance broadband and networking semiconductor company, in December 2018. Ms. Beaver received a Bachelor of Science degree in Business Administration from California State Polytechnic University, Pomona and is a certified public accountant (inactive). In appointing Ms. Beaver as a director, Organovo determined that she is qualified to be a member of the Organovo board of directors and the combined organization's board of directors based on her financial reporting and accounting expertise and experience. Specifically, the Organovo board of directors considered Ms. Beaver's prior service as Chief Financial Officer and Chief Accounting Officer for life sciences companies, her past and current board and board committee experience and her prior employment as an audit partner with KPMG LLP.

Mark Kessel joined the Organovo board of directors in August 2016. Mr. Kessel was a partner of Symphony Capital, LLC, a private equity firm he co-founded in 2002 that invests in biopharmaceutical company clinical development programs. He was also Of Counsel at the law firm of Shearman & Sterling, and a member of the firm's capital markets group until June 30, 2019. Previously, from 1971 to 2001, Mr. Kessel held various roles at Shearman & Sterling, including as managing partner leading the international law firm's day-to-day operations. He served as a leader in the healthcare, biopharmaceutical, agricultural biotech, high-tech, and financial services practices. He also established the firm's San Francisco office, serving as its managing partner. Mr. Kessel has previously served on several public biopharmaceutical company boards, including Otigone, Inc. from 2008 until 2011 and Dynavax Technologies Corporation from December 2004 until May 2013. Mr. Kessel's extensive experience in corporate governance, licensing, and strategic finance, as well as his deep experience advising pharmaceutical and biotech companies, qualify him to be a member of the Organovo board of directors and the board of directors of the combined organization.

Nilesh Kumar, Ph.D., has served as a member of Tarveda's board of directors since January 2016. Dr. Kumar has been employed as a partner of Novo Ventures (US) Inc, an affiliate of Novo Holdings A/S, since January 2017. Prior to that, Dr. Kumar was Senior Investment Director at Merck Serono Ventures from June

2009 to March 2015. Dr. Kumar currently serves on the board of directors of Morphic Holding, Inc., a Nasdaq-listed biopharmaceutical company since December 2018. From July 2017 to September 2019, Dr. Kumar served on the board of directors of Milestone Pharmaceuticals Inc., a Nasdaq-listed biopharmaceutical company. Dr. Kumar has also served on the boards of directors of various privately held life sciences and pharmaceutical companies. Dr. Kumar received his B.A. degree in Natural Sciences from the University of Cambridge, United Kingdom and his Ph.D. and M.B.A. degrees from Harvard University. Dr. Kumar was originally appointed to Tarveda's board of directors as the representative of Novo Holdings A/S pursuant to Tarveda's voting agreement, as amended and restated. Tarveda believes that Dr. Kumar's financial expertise and experience in the life sciences industry, including as investor and a director, qualifies him to serve on its board of directors and that of the combined organization.

Guido Magni, M.D., Ph.D., has served as a member of Tarveda's board of directors since January 2017. Since February 2012, Dr. Magni has served as a Partner at Versant Ventures Management, LLC ("Versant Ventures") a healthcare investment firm affiliated with Versant Venture Capital V, L.P. Prior to Versant Ventures, Dr. Magni previously served as a Managing Director of EuroVentures Inc., a Versant Ventures incubator, where he was involved in several biotech investments including Synosia (sold to Biotie Therapies), Flexion and Okairos. Prior to that, Dr. Magni served as the Global Head of the Medical Science Department of Roche Pharmaceuticals in Basel, Switzerland where he oversaw the development and registration of a number of new chemical and biological entities. Dr. Magni has served on the board of directors of Aprea Therapeutics, Inc., a Nasdaq-listed biopharmaceutical company, since March 2016, and also serves on the boards of directors of various privately held life sciences companies. Dr. Magni received his M.D. and Ph.D. in neuropharmacology from the University of Padua in Padua, Veneto, Italy. Dr. Magni was originally appointed to Tarveda's board of directors as the representative of Versant Venture Capital V, L.P. pursuant to Tarveda's voting agreement, as amended and restated. Tarveda believes Dr. Magni's medical and scientific background, combined with his significant experience as a manager, director and investor in the life sciences industry, qualifies him to serve on its board of directors and that of the combined organization.

Michael A. Metzger has served as a member of Tarveda's board of directors since June 2017. Mr. Metzger has also served as a member of the board of directors of CTI Biopharma Corp., a Nasdaq-listed biopharmaceutical company, since January 2017. Further, Mr. Metzger has served as President and Chief Operating Officer of Syndax Pharmaceuticals, Inc., a Nasdaq-listed biopharmaceutical company, since May 2015 and as a member of its board of directors since July 2019. Prior to joining Syndax, Mr. Metzger served as President and Chief Executive Officer and a member of the board of directors, from October 2014 to May 2015, and President and Chief Operating Officer, from December 2013 to October 2014, of Regado Biosciences, Inc., a former publicly traded company that merged with Tobira Therapeutics, Inc. Prior to that, Mr. Metzger served in executive level positions at multiple biopharmaceutical companies, and was a managing director at MESA Partners, Inc., a venture capital firm. Mr. Metzger received a B.A. from George Washington University and an M.B.A. in Finance from the New York University Stern School of Business. Tarveda believes Mr. Metzger's financial expertise and extensive experience in the life sciences industry qualifies him to serve on its board of directors and that of the combined organization.

Aymeric Sallin has served as a member of Tarveda's board of directors since January 2016 when Tarveda was formed from a predecessor company called Blend Therapeutics, Inc., and for which Mr. Sallin served on its board from April 2011 to January 2016. Since 2014, Mr. Sallin has served as a strategic advisory board member of the École Polytechnique Fédérale de Lausanne ("EPFL"), a research institute and university in Lausanne, Switzerland. Since 2008, Mr. Sallin has served as a member of the board of directors of Selecta Biosciences, Inc., a Nasdaq-listed biotechnology company. He also serves on the boards of directors of various privately held companies in the life sciences industry. Since 2002, Mr. Sallin has served as the Chief Executive Officer of NanoDimension, Inc. ("NanoDimension") and is the founder of the venture capital firm. Mr. Sallin received his undergraduate degree and a M.Sc. degree in Physical Engineering from EPFL in Lausanne, Switzerland. Mr. Sallin was originally appointed to Tarveda's board of directors as the representative of NanoDimension, Inc. pursuant to Tarveda's voting agreement, as amended and restated. Tarveda believes that Mr. Sallin's extensive

knowledge of the pharmaceutical field, as well as his public and private company board experience, qualifies him to serve on its board of directors and that of the combined organization.

Composition of the Board of Directors

Organovos' board of directors is currently comprised of six directors divided into three staggered classes, each class serving three-year terms. The staggered structure of the Organovo board of directors will remain in place following completion of the Merger. At the most recent annual meeting of Organovo's stockholders held in 2019, Class II directors were elected. As a result, the term of the Class II directors of the combined organization will expire upon the election and qualification of successor directors at the annual meeting of stockholders in 2022, with the terms of the Class III directors and Class I directors expiring upon the election and qualification of successor directors at the annual meetings of stockholders to be held in 2020 and 2021, respectively.

The director classes for Organovo are currently as follows:

- Class I consists of its Chairman, Kirk Malloy, Ph.D., David Shapiro, M.D., and Carolyn Beaver, each with a term expiring at the 2021 annual meeting of stockholders;
- Class II consists of Mark Kessel and Taylor Crouch, each with a term expiring at the 2022 annual meeting of stockholders; and
- Class III consists of Richard Maroun, with a term expiring at the 2020 annual meeting of stockholders.

Pursuant to the Merger Agreement, each of the directors and officers of Organovo who will not continue as directors or officers of Organovo or the surviving corporation following the consummation of the Merger shall resign immediately prior to the Effective Time. In connection with the Merger, the size of Organovo's board of directors will be increased to consist of eight directors. Pursuant to the terms of the Merger Agreement, six of such directors will be designated by Tarveda and two of such directors will be designated by Organovo. Effective as of the Effective Time, it is anticipated that Carolyn Beaver and Mark Kessel will remain on Organovo's board of directors. Then, Carolyn Beaver and Mark Kessel will elect Dr. Ausiello, Mr. Fromkin, Dr. Kumar, Dr. Magni, Mr. Metzger and Mr. Sallin to Organovo's board of directors. It is anticipated that these directors will be appointed to the three staggered director classes of the combined organization's board of directors as follows:

- Class I will consist of Ms. Beaver, Dr. Kumar and Mr. Metzger each with a term expiring at the 2021 annual meeting of stockholders.
- Class II will consist of Mr. Fromkin, Mr. Kessel and Mr. Sallin, each with a term expiring at the 2022 annual meeting of stockholders.
- Class III will consist of Dr. Ausiello and Dr. Magni, each with a term expiring at the 2020 annual meeting of stockholders.

The division of Organovo's board of directors into three classes with staggered three-year terms may delay or prevent a change of management or a change of control of Organovo, or, following the completion of the Merger, the combined organization.

Organovo's Nominating and Governance Committee is responsible for reviewing the board of directors, on an annual basis. In evaluating the suitability of individual candidates (both new candidates and current members), the Nominating and Corporate Governance Committee and the board of directors of the combined organization may take into account many factors, including the following:

- diversity of personal and professional background, perspective, experience, age, gender, ethnicity and country of citizenship;
- personal and professional integrity and ethical values;

- experience in one or more fields of business, professional, governmental, scientific or educational endeavors, and a general appreciation of major issues facing public companies similar in scope and size of the combined organization;
- experience relevant to the compbined organization's industry or with relevant social policy concerns;
- relevant academic expertise or other proficiency in an area of the combined organization's operations;
- objective and mature business judgment and expertise; and
- any other relevant qualifications, attributes or skills.

There are no family relationships among any of Organovo's current directors and executive officers, and there are no family relationships among any of the combined organization's proposed directors and executive officers.

Fifth Amended and Restated Voting Agreement

The members of the current board of directors of Tarveda were elected pursuant to the provisions of a voting agreement. Under the terms of this voting agreement, holders of Tarveda's preferred stock and certain of Tarveda's common stockholders agreed to vote their respective shares so as to elect: (a) one Series 1 Preferred Stock director designated by NanoDimension L.P. and its affiliated entities for so long as such holders continue to hold any shares of Tarveda's preferred stock, currently Aymeric Sallin; (b) one Series 1 Preferred Stock director designated by Novo Holdings A/S and its affiliated entities for so long as such holders continue to hold any shares of Tarveda's preferred stock, currently Nilesh Kumar; (c) one Series 1 Preferred Stock director designated by Versant Venture Capital V, L.P. and its affiliated entities for so long as such holders continue to hold any shares of Tarveda's preferred stock, currently Guido Magni; (d) two common directors, one of whom is the Chief Executive Officer of Tarveda, currently Andrew Fromkin, and one of whom is designated by the holders of a majority of the outstanding shares of Tarveda's common stock, currently vacant; and (e) three at-large directors, one of whom is designated by a majority of the other directors after a determination by Tarveda's board that such director is independent, currently Dennis Ausiello, and two of whom are designated by a majority of the other directors, currently Michael Metzger and one vacant. The voting agreement will terminate upon the consummation of the Merger, and no Tarveda stockholder will have any special rights regarding the election or designation of members of the board of directors of the combined organization.

Director Independence

The Organovo board of directors has determined that each of its current directors is independent as defined under Nasdaq listing standards. The Organovo board of directors has also determined that each current member of the Compensation Committee and Nominating and Corporate Governance Committee is independent as defined under Nasdaq listing standards, and that each current member of the Audit Committee is independent as defined under Nasdaq listing standards and applicable SEC rules. In making this determination, Organovo's board of directors found that none of these directors had a material or other disqualifying relationship with Organovo.

Based upon information requested from and provided by each proposed director concerning their background, employment and affiliations, including family relationships, Organovo's board of directors has determined that each of the proposed Tarveda directors is independent as defined under Nasdaq listing standards, with the exception of Andrew Fromkin who serves as Tarveda's President, Chief Executive Officer and Chairman. Organovo's board of directors also determined that Dr. Magni, Mr. Metzger and Mr. Sallin, who will comprise the Compensation Committee and Dr. Ausiello, Mr. Kessel and Dr. Kumar who will comprise the Nominating and Governance Committee, all satisfy the independence standards for such committees established by the SEC and Nasdaq listing standards, as applicable. With respect to the Audit Committee, Organovo's board of directors has determined that Ms. Beaver, Mr. Metzger and Mr. Sallin satisfy the independence standards for

such committee established by Rule 10A-3 under the Exchange Act, the SEC and Nasdaq listing standards, as applicable. The board of directors considered the relationships between such directors and certain of Tarveda's investors and determined that such relationships did not affect such directors' independence under the standards of Nasdaq, or, where applicable, under SEC rules.

Committees of the Board of Directors

The Organovo board of directors has established three standing committees to assist it in fulfilling its responsibilities to Organovo and its stockholders: the Audit Committee, the Compensation Committee, and the Nominating and Corporate Governance Committee. Each committee acts pursuant to a written charter, each of which has been posted in the "Investors" section of Organovo's website accessible at www.Organovo.com. Each committee reviews its charter on an annual basis. In addition to the three standing committees, the Board may approve from time to time the creation of other committees to assist the Board in carrying out its duties.

Immediately following the consummation of the Merger, the committees of the board of directors of the combined organization will operate pursuant to and apply Organovo's written charters and corporate governance policies currently in place, as described herein. Thereafter, the board of directors of the combined organization intends to review the written charters and corporate governance policies of Organovo and, in the discretion of the board of directors of the combined organization, adopt or amend such charters and policies.

Audit Committee

The functions of the Audit Committee include the retention of Organovo's independent registered public accounting firm, reviewing and approving the planned scope, proposed fee arrangements and results of Organovo's annual audit, reviewing the adequacy of Organovo's accounting and financial controls and reviewing the independence of the independent registered public accounting firm. The Audit Committee of the combined organization is expected to retain these duties and responsibilities following completion of the Merger.

Organovo's management has the primary responsibility for its consolidated financial statements and the reporting process including its system of internal accounting and financial controls.

Organovo's Audit Committee currently consists of Carolyn Beaver, Mark Kessel and Richard Maroun. The board of directors has determined that each of Ms. Beaver and Mr. Maroun is an "audit committee financial expert" as defined in the SEC rules.

Following the consummation of the Merger, the members of the Audit Committee are expected to be Ms. Beaver, Mr. Metzger and Mr. Sallin. Mr. Sallin is expected to be the chairman of the Audit Committee and each of Ms. Beaver and Mr. Sallin is a financial expert under the rules of the SEC. The Organovo board of directors has concluded that the composition of the Audit Committee meets the requirements for independence under the rules and regulations of Nasdaq and SEC. Organovo and Tarveda believe that, after completion of the Merger, the functioning of the Audit Committee will comply with the applicable requirements of the rules and regulations of Nasdaq and the SEC.

Compensation Committee

The functions of the Compensation Committee include the approval of the compensation offered to executive officers and recommending to the full board of directors the compensation to be offered to directors.

Organovo's Compensation Committee currently consists of Kirk Malloy, David Shapiro and Mr. Maroun.

Following the consummation of the Merger, the members of the Compensation Committee are expected to be Dr. Magni, Mr. Metzger and Mr. Sallin. Mr. Metzger is expected to be the chairman of the Compensation

Committee. The Organovo board of directors has determined that each member of the Compensation Committee is independent within the meaning of the independent director guidelines of Nasdaq. Organovo and Tarveda believe that, after the completion of the Merger, the composition of the Compensation Committee will meet the requirements for independence under, and the functioning of such Compensation Committee will comply with, any applicable requirements of the rules and regulations of Nasdaq and the SEC.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee evaluates and recommends to the board of directors nominees for each election of directors and helps oversee Organovo's regulatory and compliance matters. The Nominating and Corporate Governance Committee of the combined organization is expected to retain these duties and responsibilities following completion of the Merger.

The Nominating and Corporate Governance Committee currently consists of Messrs. Malloy and Kessel and Ms. Beaver.

Following the consummation of the Merger, the members of the Nominating and Corporate Governance Committee are expected to be Dr. Ausiello, Mr. Kessel and Dr. Kumar. Mr. Kessel is expected be the chairman of the Nominating and Corporate Governance Committee. The Organovo board of directors has determined that each member of the Nominating and Corporate Governance Committee is independent within the meaning of the independent director guidelines of Nasdaq.

Tarveda Director Compensation

The board of directors of Tarveda play a critical role in guiding Tarveda's strategic direction and overseeing the management of the corporation. For the year ended March 31, 2019, Tarveda did not have a director compensation policy in place; however Tarveda has historically compensated certain non-employee directors not affiliated with its principal stockholders for their services as members of the board of directors. Following completion of the Merger, the board of directors of Tarveda intends to establish a compensation program for its non-employee directors.

The following table sets forth compensation earned and paid to each Tarveda non-employee director who will serve as a director of the combined organization following completion of the Merger for service as a director during the fiscal year ended March 31, 2019. Tarveda did not pay any compensation other than cash fees and option awards, accordingly, it has omitted the other columns from the table.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)(1)	Total ($)
Dennis Ausiello	$ —	$ 9,990	$ 9,990
Nilesh Kumar, Ph.D.	—	—	—
Guido Magni, M.D., Ph.D.	—	—	—
Michael A. Metzger	35,000	62,900	97,900
Aymeric Sallin, M.S.	—	—	—

(1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the stock option awards granted computed in accordance with ASC 718, for stock-based compensation transactions. These amounts do not reflect the actual economic value that would be realized by the non-employee director upon the exercise of the stock options. For a discussion of the assumptions used in determining the fair value of stock option awards in the above table and other additional information on the stock options granted, see Note 11 to Tarveda's annual audited financial statements appearing elsewhere in this proxy statement/prospectus/information statement.

Tarveda Executive Compensation

The Compensation Committee of the board of directors of Tarveda is responsible for evaluating the compensation of executive officers and making recommendations regarding executive compensation to the board of directors for final approval.

The major elements of Tarveda's compensation program include:

- base salary;
- annual cash bonus incentive opportunities (target bonus) tied mostly to Tarveda's performance;
- long-term equity based incentive awards, which may include time-vesting or performance-vesting awards;
- retirement benefits through a qualified defined contribution scheme (such as a 401(k) plan in the United States); and
- other benefit programs generally available to all U.S. and non-U.S. employees that are customary and appropriate for the country in which the employee is operating.

Tarveda's Compensation Committee believes that these elements when combined are effective in achieving the overall objectives of Tarveda's compensation program.

Tarveda provides base salary based on the executive officers' individual responsibilities and performance. Each named executive officer is generally eligible for annual cash bonuses. The majority of this annual cash bonus is based on Tarveda's achievement of its corporate financial and operational goals for the year. In addition, a lesser percentage of the annual cash bonus is based on individual responsibilities and performance. Long-term incentives may be either in the form of time-vesting or performance-vesting stock options or restricted stock unit awards serve to attract and retain key executives and align the longer-term interest of Tarveda's executive officers and stockholders. Long-term incentives are discretionary.

	Description	Performance/ Job Considerations	Primary Objectives
Base Salary	Fixed cash amount	Increases based upon individual performance against goals, objectives and job criteria such as executive qualifications, responsibilities, role criticality, potential and market value.	Recruit qualified executives or personnel. Retention of personnel.
Annual Cash Incentive Opportunity	Short-term incentive, annual bonus plan	Amount of actual payment based on achievement of annual corporate financial goals, key strategic and operating objectives and—to a lesser extent—individual performance.	Promote achievement of short-term financial goals and strategic and operating objectives.
Long-Term Equity Incentive Awards	Time-vesting or Performance-vesting awards	Existence and size of equity awards is based upon the job position, individual performance and future contribution	Align the interests of executives and key employees with interest of stockholders over the long-term. Retention.

	Description	Performance/ Job Considerations	Primary Objectives
Retirement and Welfare Benefits	401(k) plan, health and insurance benefits	None, benefits offered to broad workforce	Recruit qualified employees.

Tarveda structures its annual cash bonus program to reward its executive officers and employees based primarily on company performance (the corporate component) and, to a lesser degree, an assessment of the individual employee's contribution or performance (the individual component). The key financial or operational targets of the company form the corporate component, which is reviewed and set annually. The individual component of the total cash bonus is based on an assessment of each individual's personal performance as evaluated by the Chief Executive Officer or, in the case of the Chief Executive Officer, by the board of directors. Annual cash incentives (both the corporate component and individual component) are paid at the discretion of the board of directors of Tarveda. Although Tarveda's fiscal year end is March 31st, its compensation decisions and salary adjustments, are generally evaluated on a calendar year basis.

Summary Compensation Table

The following table shows compensation awarded to, paid to or earned by, Tarveda's Chief Executive Officer and Tarveda's two other most highly compensated executive officers during the fiscal year ended 2019 who will serve as executive officers of the combined organization following the Merger. These individuals are referred to elsewhere in this proxy statement/prospectus/information statement as the "named executive officers" of Tarveda. Tarveda did not make any stock awards, nor does it have a pension plan nor did it pay any nonqualified deferred compensation in the fiscal year ended March 31, 2019, and accordingly, has omitted such columns from the table. As noted above, salary and bonus determinations are generally made on a calendar year basis, not fiscal year, whereas the table below reports amounts earned during the fiscal year.

Name and Principal Position	Year	Salary ($)	Option Awards ($)(1)	Nonequity Incentive Plan Compensation ($)(2)	All Other Compensation ($)(3)	Total ($)
Andrew J. Fromkin *President, Chief Executive Officer and Chairman*	2019	$ 454,375	$ 273,763	$ 202,950	$ 139,747	$ 1,070,835
Jeffrey D. Bloss, M.D. *Chief Medical Officer*	2019	240,352	506,277	45,308	15,664	807,601
Brian K. Roberts *Chief Financial Officer, Treasurer and Secretary*	2019	295,000	86,950	91,350	34,725	508,025

(1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the stock option awards granted computed in accordance with ASC 718, for stock-based compensation transactions. These amounts do not reflect the actual economic value that would be realized by the named executive officer upon the exercise of the stock options. For a discussion of the assumptions used in determining the fair value of stock option awards in the above table and other additional information on the stock options granted, see Note 11 to Tarveda's annual audited financial statements appearing elsewhere in this proxy statement/prospectus/information statement.

(2) Reflects performance-based cash bonuses awarded to Tarveda's named executive officers pursuant to the terms of their respective employment agreements and the achievement of pre-defined corporate and individual objectives. See "*—Employment Agreements*" below.

(3) Amounts in this column reflect 401(k) contributions, insurance premiums (life, health and dental) and health reimbursement account ("HRA") contributions and for Mr. Fromkin, also includes a living allowance per

the terms of his employment agreement. Represents, for Mr. Fromkin, $8,400 for contributions under Tarveda's 401(k) plan, $26,347 of insurance premiums and HRA contributions, and $105,000 as a living allowance per his employment agreement; for Mr. Bloss, $7,034 for contributions under Tarveda's 401(k) plan, $8,630 of insurance premiums and HRA contributions; and for Mr. Roberts, $11,253 for contributions under Tarveda's 401(k) plan, and $23,472 of insurance premiums and HRA contributions.

Outstanding Equity Awards at March 31, 2019

The following table presents the outstanding equity awards held by each of the named executive officers as of March 31, 2019. None of the Tarveda named executive officers exercised options to purchase Tarveda common stock in fiscal 2019. There were no stock awards granted to the Tarveda named executive officers in fiscal 2019, and all outstanding stock awards vested in full prior to March 31, 2019.

		Number of securities underlying unexercised options (#)			
Name	Option grant date	Exercisable	Unexercisable	Option exercise price ($)	Option expiration date
Andrew J. Fromkin	April 11, 2016	2,153,956	557,539	$ 0.18	April 9, 2026
	March 28, 2017	690,350	635,124	$ 0.31	March 26, 2027
	February 13, 2019	15,415	724,485	$ 0.37	February 10, 2029
Jeffrey D. Bloss, M.D.	September 26, 2018	—	1,158,815	$ 0.39	September 26, 2028
	February 13, 2019	4,365	205,135	$ 0.37	February 10, 2029
Brian K. Roberts	February 28, 2018	291,188	707,176	$ 0.34	February 26, 2028
	February 13, 2019	4,896	230,104	$ 0.37	February 10, 2029

Notwithstanding the values in the table above, upon the consummation of the Merger, each option to purchase Tarveda common stock that is outstanding and unexercised immediately prior to the Effective Time, as set forth above, whether or not vested, will be converted into an option to purchase Organovo common stock. Organovo will assume the Tarveda Therapeutics, Inc. 2011 Stock Incentive Plan. All rights with respect to Tarveda common stock under Tarveda options assumed by Organovo will be converted into rights with respect to Organovo common stock. Any restrictions on the exercise of the options set forth above assumed by Organovo will continue following the conversion and the term, exercisability, vesting schedules and other provisions of assumed Tarveda options will generally remain unchanged.

Employment Agreements

Tarveda has entered into employment agreements with each of its named executive officers. The agreements set forth the named executive officer's initial base salary, bonus potential, eligibility for employee benefits and severance benefits upon a qualifying termination of employment, subject to certain non-solicitation and non-competition provisions and confidentiality obligations. The key terms of Tarveda's employment arrangements with its named executive officers, including potential payments upon termination or change in control, are described below.

Agreement with Andrew J. Fromkin

In March 2015, Tarveda entered into an employment agreement with Mr. Fromkin, which was amended in April 2016, pursuant to which Mr. Fromkin serves as Tarveda's President and Chief Executive Officer. Under his employment agreement, Mr. Fromkin was entitled to an initial annual base salary of $400,000, which base salary is reviewed and may be adjusted by the Compensation Committee of Tarveda's Board of Directors on an annual basis. For the calendar year ended December 31, 2018, Mr. Fromkin's base salary was $451,000. For the calendar year ending December 31, 2019, Mr. Fromkin's base salary is $464,500. Additionally, Mr. Fromkin is

eligible to receive an annual performance bonus with a target of up to 50% of his then-current base salary, contingent upon satisfaction of pre-defined corporate and individual performance goals. Mr. Fromkin is also eligible to receive an annual living allowance in recognition of his travel and lodging expenses from his principal residence to Massachusetts. This allowance was initially $100,000 per year, and was increased to $120,000 for the calendar year ending December 31, 2019. As contemplated by his employment agreement, Mr. Fromkin was granted 135,710 shares of Tarveda common stock in March 2015, which vested as to 25% on the one-year anniversary of the grant date, with the remainder vesting monthly over the following 36 months such that the stock award was vested in full on the four-year anniversary of the grant date; and 500,000 shares of Tarveda common stock in April 2016, which vested in full on the grant date. Mr. Fromkin is eligible for additional equity awards under Tarveda's equity compensation plans, as may be granted from time to time.

Pursuant to Mr. Fromkin's employment agreement, upon termination of his employment without cause or his resignation for good reason (each as defined therein), Mr. Fromkin will be entitled to receive (i) 12 months of base salary, (ii) a *pro rata* bonus for the year of termination, and (iii) 12 months of company-paid continuing health care benefits. If the termination occurs within 12 months after a change in control (as defined therein), 100% of the then-unvested shares of Tarveda common stock granted pursuant to the agreement will immediately vest and become exercisable (50% in the event of a change in control without an associated termination of employment). Mr. Fromkin's employment is at will and may be terminated by him or by Tarveda at any time, with or without cause.

Agreement with Jeffrey D. Bloss

In July 2018, Tarveda entered into an employment agreement with Dr. Bloss pursuant to which Dr. Bloss serves as Tarveda's Chief Medical Officer. Under his employment agreement, Dr. Bloss was entitled to an initial annual base salary of $375,000, which base salary will be reviewed and may be adjusted by the Compensation Committee of Tarveda's Board of Directors on an annual basis. For the calendar year ended December 31, 2018, Dr. Bloss' base salary was $375,000. For the calendar year ending December 31, 2019, Dr. Bloss's base salary is $381,600. Additionally, Dr. Bloss is eligible to receive an annual performance bonus with a target of up to 35% of his then-current base salary, contingent on the satisfaction of pre-defined corporate and individual performance goals. As contemplated by his employment agreement, in September 2018, Dr. Bloss was granted an option to acquire 1,158,815 shares of Tarveda common stock, at an exercise price of $0.39 per share, which option vested as to 25% of the shares on the one-year anniversary of the grant date, with the remainder vesting monthly over the following 36 months such that it will be vested in full on the four-year anniversary of the grant date, subject to Dr. Bloss's continuous service through such vesting dates. Dr. Bloss is eligible for additional equity awards under Tarveda's equity compensation plans, as may be granted from time to time.

Pursuant to Dr. Bloss's employment agreement, upon termination of his employment without cause or his resignation for good reason (each as defined therein), Dr. Bloss will be entitled to (i) six months of base salary (12 months in the event of a change in control (as defined therein)) and (ii) subject to the sole discretion of and adjustment by the Compensation Committee of Tarveda's Board of Directors, a *pro rata* bonus for the year of termination (provided that in the event of change in control, such *pro rata* bonus is not discretionary). If the termination occurs within 12 months after a change in control (as defined in the agreement), 100% of Dr. Bloss's then-unvested options to purchase Tarveda common stock or other shares subject to vesting provisions will immediately vest and become exercisable (50% in the event of a change in control without an associated termination of employment). Dr. Bloss's employment is at will and may be terminated by him or by Tarveda at any time, with or without cause.

Agreement with Brian K. Roberts

In December 2017, Tarveda entered into an employment agreement with Mr. Roberts pursuant to which Mr. Roberts serves as Tarveda's Chief Financial Officer. Under his employment agreement, Mr. Roberts was entitled to an initial annual base salary of $290,000, which base salary will be reviewed and may be adjusted by

the Compensation Committee of Tarveda's Board of Directors on an annual basis. For the calendar year ended December 31, 2018, Mr. Roberts's base salary was $290,000. For the calendar year ending December 31, 2019, Mr. Roberts's base salary is $310,000. Additionally, Mr. Roberts is eligible to receive an annual performance bonus with a current target of up to 35% of his then-current base salary, contingent on the satisfaction of pre-defined corporate and individual performance goals. As contemplated by his employment agreement, in February 2018, Mr. Roberts was granted an option to acquire 998,364 shares of Tarveda common stock, at an exercise price of $0.34 per share, which option vested as to 25% of the shares on the one-year anniversary of the grant date, with the remainder vesting monthly over the following 36 months, such that it will be vested in full on the four-year anniversary of the grant date, subject to Mr. Roberts's continuous service through such vesting dates. Mr. Roberts is eligible for additional equity awards under Tarveda's equity compensation plans, as may be granted from time to time.

Pursuant to Mr. Roberts's employment agreement, upon termination of his employment without cause or his resignation for good reason (each as defined therein), Mr. Roberts will be entitled to receive (i) six months of base salary (12 months in the event of a change in control (as defined therein), (ii) subject to the sole discretion of and adjustment by the Compensation Committee of Tarveda's Board of Directors, a *pro rata* bonus for the year of termination (provided that in the event of change in control, such *pro rata* bonus is not discretionary), and (iii) 12 months of company-paid continuing health care benefits. If the termination occurs within 12 months after a change in control, 100% of Mr. Roberts's then-unvested options to purchase Tarveda common stock or other shares subject to vesting provisions will immediately vest and become exercisable (50% in the event of a change in control without an associated termination of employment). Mr. Roberts's employment is at will and may be terminated by him or by Tarveda at any time, with or without cause.

Tarveda intends to enter into new employment agreements with each of its named executive officers in connection with the closing of the Merger.

Rule 10b5-1 Sales Plans

The combined organization's directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of Organovo's common stock on a periodic basis. Under a Rule 10b5-1 plan a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend or terminate the plan in some circumstances. The combined organization's directors and executive officers may also buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material, nonpublic information. Any purchase or sales by the combined organization's directors and executive officers, including pursuant to a 10b5-1 plan, will be subject to the terms of any lock-up agreements entered into by such directors and executive officers.

Accounting and Tax Considerations

Section 162(m) of the Code places a limit of $1,000,000 on the amount of compensation that a public company may deduct as a business expense in any year with respect to such company's chief executive officer and certain other named executive officers. This deduction limitation did not previously apply to Tarveda as a private company.

The combined organization's Compensation Committee intends to maximize deductibility of compensation under Section 162(m) to the extent practicable while maintaining a competitive, performance-based compensation program. However, the combined organization's compensation committee reserves the right to award compensation which it deems to be in the combined organization's best interest and in the best interest of its stockholders, but which may not be fully tax deductible under Code Section 162(m).

Employment Benefits Plans

Tarveda 2011 Stock Incentive Plan

At the Effective Time, each option to purchase Tarveda common stock that is outstanding and unexercised immediately prior to the Effective Time under the 2011 Tarveda Plan, whether or not vested, will be converted into an option to purchase Organovo common stock. Organovo will assume the 2011 Tarveda Plan. All rights with respect to Tarveda common stock under Tarveda options assumed by Organovo will be converted into rights with respect to Organovo common stock. Accordingly, from and after the Effective Time, each Tarveda stock option assumed by Organovo may be exercised for such number of shares of Organovo common stock as is determined by multiplying the number of shares of Tarveda common stock subject to the option by the Exchange Ratio and rounding that result down to the nearest whole number of shares of Organovo common stock. The per share exercise price of the converted option will be determined by dividing the existing exercise price of the option by the Exchange Ratio and rounding that result up to the nearest whole cent. Any restrictions on the exercise of any Tarveda option assumed by Organovo will continue following the conversion and the term, exercisability, vesting schedules and other provisions of assumed Tarveda options will generally remain unchanged; provided, that any Tarveda options assumed by Organovo may be subject to adjustment to reflect changes in Organovo capitalization after the Effective Time and that the Organovo board of directors or a committee thereof will succeed to the authority of the board of directors of Tarveda with respect to each assumed Tarveda option.

Tarveda 401(k) Plan

Tarveda has a defined contribution retirement plan in which all employees are eligible to participate. This plan is intended to qualify under Section 401(k) of the Code so that contributions by employees and by Tarveda to the plan and income earned on plan contributions are not taxable to employees until withdrawn or distributed from the plan, and so that contributions, including employee salary deferral contributions, will be deductible by Tarveda when made. Tarveda currently provides contributions under this plan of up to 3% of an employee's compensation, subject to statutory limits.

Participants may elect a salary deferral up to the statutorily prescribed annual limit for tax-deferred contributions and Tarveda may make contributions up to 3.0% of the participant's compensation, subject to certain statutory limits. Tarveda made contributions of $0.2 million and $0.1 million for the years ended March 31, 2019 and 2018, respectively.

Tarveda also contributes to medical, disability and other standard insurance plans for its employees.

Compensation Committee Interlocks and Insider Participation

Following the completion of the Merger, the members of the Compensation Committee are expected to be Dr. Magni, Mr. Metzger and Mr. Sallin. Mr. Metzger is expected to be the chairman of the Compensation Committee. Each member of the Compensation Committee is expected to be a "non-employee" director within the meaning of Rule 16b-3 of the rules promulgated under the Exchange Act and independent within the meaning of the independent director guidelines of Nasdaq. None of the proposed combined organization's executive officers serve as a member of the board of directors or compensation committee of any entity that has one or more executive officers who is proposed to serve on the combined organization's board of directors or Compensation Committee following the completion of the Merger.

RELATED PARTY TRANSACTIONS OF DIRECTORS AND EXECUTIVE OFFICERS OF THE COMBINED ORGANIZATION

Described below are all transactions occurring since April 1, 2017 and all currently proposed transactions to which either Organovo or Tarveda was a party and in which

- The amounts involved exceeded or will exceed $120,000 or 1% of the average of the total assets of Organovo or Tarveda, as the case may be, at year-end for the last two completed fiscal years; and
- A director, executive officer, holder of more than 5% of the outstanding capital stock of Organovo or Tarveda, or any member of such person's immediate family had or will have a direct or indirect material interest, other than compensation, termination and change in control arrangements that are described under the section entitled "*Management Following the Merger — Tarveda Executive Compensation*" of this proxy statement/prospectus/information statement.

Organovo Transactions

Research Services Agreement with Cirius Therapeutics, Inc.

In August 2017, Organovo entered into a research services agreement with Cirius Therapeutics, Inc., an entity for which Robert Baltera, Jr., then a director of Organovo, serves as Chief Executive Officer and President. Under this agreement, Organovo was providing standard research services to Cirius Therapeutics, Inc. utilizing its ExVive™ Liver Tissue platform. Organovo has provided ExVive™ Liver Tissue Services for Cirius in the amount of $281,000 to date, of which $120,000 and $161,000 was recognized as revenue in the years ended March 31, 2019 and March 31, 2018, respectively. The agreement with Cirius Therapeutics does not require Organovo to make any payments to Cirius Therapeutics or Mr. Baltera, and Mr. Baltera has no direct interest in the transaction.

Organovo entered into the agreement with Cirius Therapeutics in the ordinary course of business and on terms and conditions it believes are as fair as those it offers and receives from non-related third parties. In addition, a committee of the Organovo board of directors comprised entirely of independent, non-employee directors approved Organovo's transactions with Cirius Therapeutics in accordance with Organovo's Related Party Transaction Policy and Procedures described below.

In addition, Organovo's board of directors evaluated Mr. Baltera's continued status as an "independent" director in light of Organovo's transactions with Cirius Therapeutics. Based on that evaluation, Organovo's board of directors determined that Mr. Baltera continued to qualify as an independent director in accordance with the listing standards of Nasdaq and the rules and regulations of the Securities and Exchange Commission. Organovo's board of directors also determined that Mr. Baltera continued to qualify as an "independent" director for purposes of his service on Organovo's Audit and Compensation Committees, and that he also qualified as a "non-employee director" for purposes of Rule 16b-3 under the Exchange Act and as an "outside director" for purposes of Section 162(m) of the Internal Revenue Code of 1986, as amended. Mr. Baltera's term as a director expired in September 2019.

Collaboration Agreement with Viscient Biosciences, Inc.

In November 2017, Organovo entered into a collaboration agreement with Viscient Biosciences, Inc. ("Viscient") to develop a custom research platform for studying liver disease. Keith Murphy, who served on the Organovo board of directors until August 2017 and as Organovo's Chief Executive Officer and President until April 2017, is the Chief Executive Officer and President of Viscient. Mr. Murphy is also a 10% or greater stockholder of Viscient. Under this agreement and its amendments, Organovo was providing research services to Viscient in exchange for cash payments. Viscient intended to use the research platform to target early discovery work for non-alcoholic fatty liver disease and non-alcoholic steatohepatitis. Under this agreement and its

amendments, Organovo provided research services to Viscient amounting to $385,000 recognized as revenue in the year ended March 31, 2018. In September 2018, Viscient purchased study materials from Organovo in the amount of $2,000 to date, pursuant to the terms of a Quote, of which $2,000 was recognized as revenue in the year ended March 31, 2019. In November 2018, Viscient executed a Quote to purchase research services from Organovo in the amount of $142,000, of which $42,000 was recognized as revenue in the year ended March 31, 2019. Additionally, Viscient entered into multiple Quotes throughout the 2018 and 2019 fiscal years to purchase primary human cell-based products from Organovo's subsidiary, Samsara, in the amount of $165,000 to date, of which $96,000 and $14,000 were recognized as revenue in the years ended March 31, 2019 and March 31, 2018, respectively. The agreement with Viscient did not require Organovo to make any payments to Viscient or Mr. Murphy, and Mr. Murphy has no direct interest in the transaction.

Organovo entered into the agreement with Viscient in the ordinary course of business and on terms and conditions it believes are as fair as those it offers and receives from non-related third parties. In addition, Organovo's Audit Committee approved Organovo's transactions with Viscient in accordance with Organovo's Related Party Transaction Policy and Procedures described below.

Asset Purchase Agreement with Viscient Biosciences, Inc.

On November 6, 2019, Organovo entered into an Asset Purchase and Non-exclusive License Agreement with Viscient, under which Viscient acquired three bioprinters, and a limited, nontransferable, non-sublicensable, non-exclusive license under certain Organovo patents, for a total price of $170,000. The Agreement was amended on December 7, 2019, to clarify that the scope of the license does not include rights to lease, sell, offer for sale, import, or export bioprinters or bioinks covered by the Organovo patents. As discussed above, Keith Murphy who served on the Organovo board of directors until August 2017 and as Organovo's Chief Executive Officer and president until April 2017, is the chief executive officer and president of Viscient.

Related Party Transaction Policy and Procedures

Pursuant to Organovo's Related Party Transaction Policy and Procedures, Organovo's executive officers, directors, and principal stockholders, including their immediate family members and affiliates, are prohibited from entering into a related party transaction with Organovo without the prior consent of Organovo's Audit Committee or a committee of Organovo's independent directors. Any request for Organovo to enter into a transaction with an executive officer, director, principal stockholder, or any of such persons' immediate family members or affiliates, in which the amount involved exceeds $120,000 must first be presented to Organovo's Audit Committee for review, consideration and approval. In approving or rejecting the proposed agreement, Organovo's Audit Committee will consider the relevant facts and circumstances available and deemed relevant, including, but not limited, to the risks, costs and benefits to Organovo, the terms of the transaction, the availability of other sources for comparable services or products, and, if applicable, the impact on a director's independence. Organovo's Audit Committee shall approve only those agreements that, in light of known circumstances, are in, or are not inconsistent with, Organovo's best interests, as Organovo's Audit Committee determines in the good faith exercise of its discretion.

Tarveda Transactions

Series D Preferred Stock Financing

In various closings in January 2017 and January 2019, Tarveda issued an aggregate of 33,291,328 shares of its Series D convertible preferred stock (the "Series D Preferred Stock") at a price per share of $1.10 in a private placement to accredited investors, raising aggregate gross proceeds of $36.7 million.

The table below sets forth the number of shares of the Series D Preferred Stock purchased by Tarveda's then executive officers, directors, holders of more than 5% of Tarveda's share capital and their affiliated entities or immediate family members.

Name	Series D Preferred Shares (#) (1)	Aggregate Cash Purchase Price ($)
Novo Holdings A/S (2)	6,218,367	6,846,920
New Enterprise Associates 13, L.P. (3)	6,867,959	7,562,172
Entities affiliated with Versant Ventures (4)	16,385,124	18,041,332
Entities affiliated with NanoDimension (5)	3,819,878	4,205,991

(1) In December 2019, the shares of Series D Preferred Stock held by Novo Holdings A/S, entities affiliated with Versant Ventures and entities affiliated with NanoDimension were exchanged for Series CS Preferred Stock at a one-for-one ratio. The shares of Series D Preferred Stock held by New Enterprise Associates were converted into common stock at a one-for-one ratio in accordance with their terms in October 2019.
(2) Nilesh Kumar, Ph.D., a member of Tarveda's board of directors, is employed as a partner of Novo Ventures (US) Inc., an affiliate of Novo Holdings A/S, one of Tarveda's significant stockholders.
(3) At the time of the January 2017 and January 2019 closings of the sale of Series D Preferred Stock, New Enterprise Associates, one of Tarveda's significant stockholders at such times, also had designees on its board of directors.
(4) Guido Magni, M.D., Ph.D., a member of Tarveda's board of directors, is a Partner at Versant Ventures, one of Tarveda's significant stockholders.
(5) Aymeric Sallin, a member of Tarveda's board of directors, is the Managing Partner at NanoDimension, one of Tarveda's significant stockholders.

Series 1 Preferred Stock Financing

In December 2019, Tarveda issued an aggregate of 12,382,559 shares of Series 1 Preferred Stock at a price per share of $1.10108 in a private placement to accredited investors for aggregate gross cash proceeds of $13.6 million.

The table below sets forth the number of shares of the Series 1 Preferred Stock purchased by Tarveda's executive officers, directors, holders of more than 5% of Tarveda's share capital and their affiliated entities or immediate family members. Each share of Series 1 Preferred Stock in the following table will automatically convert into 50 shares of Tarveda common stock and be exchanged for Organovo common stock upon the completion of the Merger.

Name	Series 1 Preferred Shares (#)	Aggregate Cash Purchase Price ($)
Novo Holdings A/S (1)	5,085,317	5,599,341
Entities affiliated with Versant Ventures (2)	3,962,595	4,363,134
Entities affiliated with NanoDimension (3)	2,758,679	3,037,526
Entity affiliated with Andrew J. Fromkin	149,128	164,202

(1) Nilesh Kumar, Ph.D., a member of Tarveda's board of directors, is employed as a partner of Novo Ventures (US) Inc., an affiliate of Novo Holdings A/S, one of Tarveda's significant stockholders.
(2) Guido Magni, M.D., Ph.D., a member of Tarveda's board of directors, is a Partner at Versant Ventures, one of Tarveda's significant stockholders.
(3) Aymeric Sallin, a member of Tarveda's board of directors, is the Managing Partner at NanoDimension, one of Tarveda's significant stockholders.

Fifth Amended and Restated Investors' Rights Agreement

In connection with the December 2019 sale of the Series 1 Preferred Stock, Tarveda entered into a fifth amended and restated investors' rights agreement, dated as of December 12, 2019, with certain holders of its outstanding preferred stock, including entities affiliated with Novo Holdings A/S, Versant Ventures and NanoDimension, significant stockholders of Tarveda, and certain holders of its outstanding common stock, including Andrew Fromkin, Tarveda's President, Chief Executive Officer and Chairman, and an entity affiliated with Andrew Fromkin. The agreement provides these stockholders with certain registration rights, including the right to demand that Tarveda file a registration statement or request that their shares be covered by a registration statement that Tarveda is otherwise filing. Nilesh Kumar, Ph.D., Guido Magni, M.D., Ph.D. and Aymeric Sallin, members of the board of directors of Tarveda, are affiliated with Novo Holdings A/S, Versant Ventures and NanoDimension, respectively. The investors' rights agreement also provides these stockholders with information rights, which will terminate upon the consummation of the Merger.

Following the consummation of the Merger, the aforementioned stockholders will continue to have demand registration rights and piggyback registration rights. For a description of such surviving registration rights, see the section titled "*Comparison of Rights of Holders of Organovo Stock and Tarveda Stock.*"

Fifth Amended and Restated Voting Agreement

In connection with the December 2019 sale of the Series 1 Preferred Stock, Tarveda entered into a fifth amended and restated voting agreement, dated as of December 12, 2019, with certain holders of its outstanding preferred stock, including entities affiliated with Novo Holdings A/S, Versant Ventures and NanoDimension, significant stockholders of Tarveda, and certain holders of its outstanding common stock, including Andrew Fromkin, Tarveda's President, Chief Executive Officer and Chairman, and an entity affiliated with Andrew Fromkin. The agreement requires such holders to vote in accordance with its terms, including in matters related to the composition of Tarveda's board of directors, and provides for transfer restrictions as well as drag-along rights with respect to proposed sales of Tarveda securities. This agreement will terminate upon the consummation of the Merger.

Fifth Amended and Restated Right of First Refusal and Co-sale Agreement

In connection with the December 2019 sale of the Series 1 Preferred Stock, Tarveda entered into a fifth amended and restated right of first refusal and co-sale agreement, dated as of December 12, 2019, with certain holders of its outstanding preferred stock, including entities affiliated with Novo Holdings A/S, Versant Ventures and NanoDimension, significant stockholders of Tarveda, and certain holders of its outstanding common stock, including Andrew Fromkin, Tarveda's President, Chief Executive Officer and Chairman, and an entity affiliated with Andrew Fromkin. This agreement will terminate upon consummation of the Merger.

Director and Executive Officer Compensation

For information regarding the compensation of Tarveda's directors and executive officers, please see the section titled "*Management Following the Merger — Tarveda Executive Compensation — Employment Agreements*" and "*Management Following the Merger — Tarveda Director Compensation*" in this proxy statement/prospectus/information statement.

Director and Officer Indemnification

Tarveda has entered into an indemnification agreement with each of its officers and directors. These agreements require Tarveda to indemnify these individuals to the fullest extent permitted under Delaware law against liabilities that may arise by reason of their service to Tarveda, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. For more information regarding Tarveda director and officer indemnification, please see the section titled "*The Merger — Interests of the Tarveda Directors and Executive Officers in the Merger — Limitations on Liability and Indemnification*."

Other Transactions

On March 2, 2015, Tarveda issued 135,710 shares of restricted common stock to Andrew J. Fromkin, Tarveda's Chief Executive Officer, in exchange for a note receivable in the amount of $265,336, which accrued interest at 1.14% and matured on March 2, 2019. The restrictions on the shares of common stock lapsed at a rate of 25% after the first year and then at a rate of 2.1% monthly through March 2, 2019. Accordingly, all 135,710 shares of common stock were vested as of March 31, 2019. Tarveda forgave the note receivable in full in the fiscal year ended March 31, 2016.

On April 11, 2016, Tarveda issued 500,000 fully vested shares of restricted common stock to Andrew J. Fromkin, Tarveda's Chief Executive Officer, in exchange for a note receivable in the amount of $90,000, which accrued interest at 1.45% and matured on April 11, 2026, unless certain events occur prior to that date. Tarveda forgave the note receivable in full in November 2019.

Placon Therapeutics, Inc.

In January 2016, Tarveda spun-off certain legacy assets unrelated to its *Pentarin* miniature drug conjugates platform through a *pro rata* distribution to its stockholders. Accordingly, Tarveda entered into a contribution agreement with a newly-formed entity, Placon Therapeutics, Inc. ("Placon"), pursuant to which Tarveda contributed certain assets relating to its original intellectual property to Placon in exchange for shares of Placon capital stock. Tarveda then immediately distributed all the issued and outstanding shares of Placon capital stock to its stockholders on a *pro rata* basis, which stockholders included Tarveda's then executive officers, directors and holders of more than 5% of its outstanding capital stock. Accordingly, immediately following the distribution, the stockholders of Placon were identical to Tarveda's stockholders. Tarveda provides certain administrative and consulting services to Placon under a master services agreement, pursuant to which Tarveda received an aggregate of $157,378 of fees through the fiscal year ended March 31, 2019. No executive officer or director of Tarveda holds a direct or indirect material interest in Placon, and no executive officers or directors of Tarveda other than Mr. Sallin currently serve as executive officers or directors of Placon.

Related Party Transaction Policy

The board of directors of Tarveda reviews and considers the interests of its directors, executive officers and principal stockholders in its review and consideration of transactions and forms committees of non-interested directors when it determines that the formation of such committees is appropriate under the circumstances.

Upon consummation of the Merger, the Audit Committee of the board of directors of the combined organization will apply Organovo's related party transaction policy, described above, until such time as the board of directors of the combined organization shall amend the policy. All of the Tarveda transactions described in this section were entered into prior to the application of this policy to Tarveda. Although Tarveda has not had a written policy for the review and approval of transactions with related persons, the board of directors of Tarveda has historically reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Prior to approving such a transaction, the material facts as to a director's or officer's relationship or interest in the agreement or transaction were disclosed to the board of directors. The board of directors took this information into account when evaluating the transaction and in determining whether such transaction was fair to Tarveda and in the best interest of all Tarveda stockholders.

UNAUDITED PRO FORMA COMBINED FINANCIAL STATEMENTS

The Merger

On December 13, 2019, Organovo, Tarveda and Merger Sub entered into the Merger Agreement. Upon the terms and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, including approval of the transaction by Organovo's stockholders and Tarveda's stockholders, Merger Sub will merge with and into Tarveda, with Tarveda becoming a wholly-owned subsidiary of Organovo and the surviving corporation of the merger (the "Merger").

On January 26, 2020, Organovo, Merger Sub and Tarveda entered into the First Amendment (the "Amendment to Merger Agreement") to the Merger Agreement. The Amendment to Merger Agreement amends the definition of Organovo's valuation under the terms of the Merger Agreement to increase Organovo's valuation by $1.5 million for value attributable to Organovo's intellectual property, if Organovo does not sell or transfer its intellectual property and remaining assets prior to the closing of the Merger. The Amendment to Merger Agreement also makes technical changes to the Organovo stockholder proposals to be voted on by the Organovo stockholders at the Organovo special meeting.

At the Effective Time of the Merger, each share of Tarveda common stock outstanding immediately prior to the Effective Time (excluding certain shares to be canceled pursuant to the Merger Agreement and shares held by stockholders who have exercised and perfected appraisal rights or dissenters' rights as more fully described in the section of this proxy statement/prospectus/information statement titled *"The Merger — Appraisal Rights and Dissenters' Rights"*) will be converted into the right to receive a number of shares of Organovo's common stock equal to the Exchange Ratio. For purposes of preparing these unaudited pro forma combined financial statements, the Exchange Ratio is estimated to be 0.1331, which was calculated based on the definition in the Merger Agreement using the companies' fully-diluted outstanding shares as of December 31, 2019. The Exchange Ratio is subject to change to account for, among other things, Organovo's net cash as of the business day prior to the Closing. Under the Exchange Ratio formula in the Merger Agreement, the former Tarveda equity holders immediately before the Effective Time are expected to own approximately 75% of the outstanding capital stock of Organovo on a fully-diluted basis, and the stockholders of Organovo immediately before the Effective Time are expected to own approximately 25% of the outstanding capital stock of Organovo on a fully-diluted basis, subject to adjustment based upon whether Organovo's net cash at the closing of the Merger is greater or less than $22.0 million, the $1.5 million adjustment to Organovo's valuation per the terms of the Amendment to Merger Agreement and other potential adjustments.

Each share of Tarveda preferred stock outstanding immediately prior to the Effective Time (excluding certain shares to be canceled pursuant to the Merger Agreement and shares held by stockholders who have exercised and perfected appraisal rights or dissenters' rights as more fully described in the section of this proxy statement/prospectus/information statement titled *"The Merger — Appraisal Rights and Dissenters' Rights"*) is expected to be converted into Tarveda common stock in accordance with its terms, which would then convert into the right to receive Organovo common stock along with all other shares of Tarveda common stock as described above. Because, among other things, the number of shares of Organovo common stock issuable to Tarveda's securityholders is determined based on Organovo's net cash balance on the business day prior to the Closing and the capitalization of Tarveda and Organovo at the Closing, Organovo's securityholders cannot be certain of the exact number of shares that will be issued to (or reserved for issuance to) Tarveda's securityholders when Organovo's stockholders vote on the proposals at the Special Meeting. The Exchange Ratio referenced above is an estimate only and the final Exchange Ratio will be determined pursuant to a formula described in more detail in the Merger Agreement and in this proxy statement/prospectus/information statement.

Series 1 Financing

On December 12, 2019, prior to the execution of the Merger Agreement, Tarveda issued 12,382,559 shares of its Series 1 Preferred Stock, $0.0001 par value per share (the "Series 1 Preferred") at a price of $1.10108 per

share in consideration for gross proceeds of approximately $13.6 million (the “Series 1 Financing”). In conjunction with the Series 1 Financing, each outstanding share of common stock and preferred stock (other than the Series 1 Preferred) held by each stockholder of Tarveda that was an accredited investor and purchased at least its full pro rata portion of the shares of Series 1 Preferred issued and sold in the Series 1 Financing, was exchanged for one share of Tarveda’s Series CS Preferred.

On December 14, 2019, all outstanding shares of Tarveda’s Existing Preferred Stock, that were not exchanged for Series CS Preferred Stock, were automatically converted in the Existing Preferred Automatic Conversion. The Oxford Series D Warrants were amended and restated such that they are exercisable for the same number of shares of Series 1 Preferred as the number of shares of Series D Preferred Stock that they would have been exercisable for prior to the amendment and restatement. In connection with the Existing Preferred Automatic Conversion, all other warrants exercisable for Tarveda’s Existing Preferred Stock became exercisable for a number of shares of Tarveda common stock as the holder of such warrant would have received had they held the underlying shares of Existing Preferred Stock immediately prior to the Existing Preferred Automatic Conversion. Prior to the close of the Merger, it is anticipated that all outstanding shares of Series 1 Preferred and Series CS Preferred will be converted into Tarveda common stock at the conversion rate then in effect.

Pro Forma Financial Information

The following unaudited pro forma combined financial information gives effect to the Merger, but does not give effect to the proposed Organovo Reverse Stock Split because the proposed reverse stock split is a range and is not final.

In the unaudited pro forma combined financial statements, the Merger has been accounted for as a reverse recapitalization under U.S. GAAP because the primary assets of Organovo at the Effective Date are expected to be primarily cash and short-term investments. Tarveda was determined to be the accounting acquirer based upon the terms of the Merger and other factors including: (1) Tarveda stockholders will own a substantial majority of the voting rights of the combined organization; (2) Tarveda will designate a majority (six of eight) of the initial members of the board of directors of the combined organization; and (3) Tarveda’s senior management will hold all key positions in senior management of the combined organization.

The unaudited pro forma combined balance sheet data as of December 31, 2019 gives effect to the Merger as if it took place on December 31, 2019. The unaudited pro forma combined statements of operations and comprehensive loss data for the year ended March 31, 2019 and the nine months ended December 31, 2019 gives effect to the Merger as if it took place on April 1, 2018. The historical financial statements of Organovo and Tarveda have been adjusted to give pro forma effect to events that are (1) directly attributable to the Merger, (2) factually supportable, and (3) with respect to the unaudited pro forma combined statements of operations, expected to have a continuing impact on the combined results of operations of the combined organization. The adjustments presented on the unaudited pro forma condensed combined financial statements have been identified and presented to provide relevant information necessary for an accurate understanding of the combined organization upon consummation of the Merger.

The unaudited pro forma condensed combined financial information is based on assumptions and adjustments that are described in the accompanying notes. The unaudited pro forma condensed combined financial information is for illustrative purposes only. The financial results may have been different had the companies always been combined. The unaudited pro forma condensed combined financial information should not be relied upon as being indicative of the historical results that would have been achieved had the companies always been combined or the future results that the combined organization will experience. The actual amounts recorded as of the completion of the Merger may differ materially from the information presented in these unaudited pro forma combined financial statements as a result of the amount of cash used by Organovo’s operations between the signing of the Merger Agreement and the Closing, the timing of Closing of the Merger, and other changes in Organovo’s assets and liabilities that occur prior to the completion of the Merger.

The unaudited pro forma combined financial statements, including the notes thereto, should be read in conjunction with the separate historical consolidated financial statements of Organovo and Tarveda and the section titled "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" in the documents that are incorporated by reference in this proxy statement/prospectus/information statement and the section of this proxy statement/prospectus/information statement titled "*Tarveda Management's Discussion and Analysis of Financial Condition and Results of Operations*." Organovo's historical audited consolidated financial statements for the year ended March 31, 2019 and unaudited condensed financial statements for the nine months ended December 31, 2019 incorporated by reference in this proxy statement/prospectus/information statement. Tarveda's historical audited financial statements for the year ended March 31, 2019 and unaudited financial statements for the nine months ended December 31, 2019 appear elsewhere in this proxy statement/prospectus/information statement.

Unaudited Pro Forma Condensed Combined Balance Sheet
As of December 31, 2019
(in thousands, except share and per share data)

	Tarveda	Organovo	Pro Forma Merger Adjustments		Pro Forma Combined Total
ASSETS					
Current assets:					
Cash and cash equivalents	$ 15,463	$ 30,467	$ —		$ 45,930
Prepaid expenses and other current assets	2,600	639	—		3,239
Total current assets	18,063	31,106	—		49,169
Operating lease right-of-use assets	2,507	—	—		2,507
Property and equipment, net	380	—	—		380
Restricted cash	184	79	—		263
Other non-current assets	25	127	—		152
Total assets	$ 21,159	$ 31,312	$ —		$ 52,471
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK & STOCKHOLDERS' DEFICIT					
Current liabilities:					
Accounts payable	$ 2,098	$ 822	$ —		$ 2,920
Accrued expenses	2,909	1,536	10,670	B, D	15,115
Current portion of operating lease liabilities	751	—	—		751
Other current liabilities	19	—	—		19
Total current liabilities	5,777	2,358	10,670		18,805
Warrant liability	166	—	(166)	C	—
Note payable to lender, net of current portion	9,877	—	—		9,877
Operating lease liabilities, net of current portion	1,911	—	—		1,911
Total long-term liabilities	11,954	—	(166)		11,788
Total liabilities	17,731	2,358	10,504		30,593
Commitments and contingencies					
Series 1 redeemable convertible preferred stock, par value of $0.0001 per share; 12,518,789 shares authorized and 12,382,559 shares issued and outstanding as of December 31, 2019	13,677	—	(13,677)	A	—
Stockholders' deficit:					—
Series CS convertible preferred stock, par value of $0.0001 per share; 52,784,901 shares authorized and 52,784,901 outstanding at December 31, 2019	5	—	(5)	A	—
Common stock, par value of $0.0001 per share; 136,964,196 shares authorized and 36,113,769 shares issued and outstanding as of December 31, 2019	4	—	(4)		—
Common stock, par value of $0.001 per share; 200,000,000 shares authorized and 130,497,563 issued and outstanding as of December 31, 2019; 3,301,528,639 issued and outstanding pro forma	—	130	441	E	571
Additional paid-in capital	111,207	305,566	(258,408)	E	158,365
Accumulated deficit	(121,465)	(276,742)	261,149	E	(137,057)
Total stockholders' equity (deficit)	(10,249)	28,954	3,174		21,879
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	$ 21,159	$ 31,312	$ —		$ 52,471

Unaudited Pro Forma Condensed Combined Statements of Operations
Nine Months Ended December 31, 2019
(in thousands, except share and per share data)

	Tarveda	Organovo	Pro Forma Merger Adjustments		Pro Forma Combined
Revenues:					
Products and services	$ —	$ 2,055	—		$ 2,055
Collaborations and licenses	—	89	—		89
Grants	—	52	—		52
Total revenues	—	2,196	—		2,196
Cost of revenues	—	328	—		328
Operating expenses:					
Research and development	11,124	5,413	—		16,537
General and administrative	4,709	15,037	—		19,746
Total operating expenses	15,833	20,450	—		36,283
Loss from operations	(15,833)	(18,582)	—		(34,415)
Other income (expense):					
Interest income (expense)	(664)	507	—		(157)
Gain on fixed asset disposal	—	111	—		111
Gain on lease termination	—	525	—		525
Change in fair value of warrant liability	16	—	(16)	**F**	—
Other income	187	1,454			1,641
Total other income (expense)	(461)	2,597	(16)		2,120
Loss before income taxes	(16,294)	(15,985)	(16)		(32,295)
Income tax provision	—	(2)	—		(2)
Net loss	$ (16,294)	$ (15,987)	$ (16)		$ (32,297)
Net loss attributable to common stockholders—basic and diluted	(3,379)	(15,987)	7,237	**G**	(12,129)
Net loss attributable to Series CS preferred stockholders—basic and diluted	(36,451)	—	—		
Weighted average common stock outstanding—basic and diluted	17,789,978	129,234,731	—		555,658,231
Weighted average Series CS preferred stock outstanding—basic and diluted	3,838,902	—	—		$ —
Net loss per share attributable to common stockholders—basic and diluted	$ (0.19)	$ (0.12)	—	**H**	$ —
Net loss per share attributable to Series CS preferred stockholders—basic and diluted	$ (9.50)	—	—	**H**	$ —

Unaudited Pro Forma Condensed Combined Statements of Operations
Year Ended March 31, 2019
(in thousands, except share and per share data)

	Tarveda	Organovo	Pro Forma Merger Adjustments		Pro Forma Combined
Revenues:					
Products and services	$ —	$ 2,333	—		$ 2,333
Collaborations and licenses	—	171	—		171
Grants	—	587	—		587
Total revenues	—	3,091	—		3,091
Cost of revenues	—	482	—		482
Operating expenses:					—
Research and development	16,685	14,752	—		31,437
General and administrative	4,847	15,131	—		19,978
Total operating expenses	21,532	29,883	—		51,415
Loss from operations	(21,532)	(27,274)	—		(48,806)
Other income (expense):					—
Interest expense, net	(447)	705	—		258
Gain (loss) on fixed asset disposal	—	(63)	—		(63)
Loss on extinguishment of debt	(403)	—	—		(403)
Change in fair value of warrant liability	21	—	(21)	F	—
Other income, net	267	—	—		267
Total other expense	(562)	642	(21)		59
Loss before income taxes	(22,094)	(26,632)	(21)		(48,747)
Income tax provision	—	(3)	—		(3)
Net loss	$ (22,094)	$ (26,635)	$ (21)		$ (48,750)
Accretion of preferred stock	(4,843)	—	4,843	G	—
Net loss attributable to common stockholders—basic and diluted	$ (26,937)	$ (26,635)	$ 4,822		$ (48,750)
Net loss per share attributable to common stockholders—basic and diluted	$ (6.56)	$ (0.23)	—		$ (0.09)
Weighted average common shares outstanding—basic and diluted	4,105,757	115,379,902	—	H	540,887,981
Net loss	$ (22,094)	$ (26,635)	—		$ (48,750)
Other comprehensive income (loss):					
Unrealized gain on investments	4	—	—		4
Comprehensive loss	$ (22,090)	$ (26,635)	—		$ (48,746)

Notes to Unaudited Pro Forma Combined Financial Statements

1. Description of Transactions

The Merger

On December 13, 2019, Organovo, Tarveda and Merger Sub entered into the Merger Agreement. At the Effective Time of the Merger, each share of Tarveda common stock outstanding immediately prior to the Effective Time (excluding certain shares as described above), including preferred stock that is expected to be converted into common stock as described above, will be converted into the right to receive a number of shares of Organovo's common stock equal to the Exchange Ratio. The Exchange Ratio is initially estimated to be 0.1331, which was calculated based on the definition in the Merger Agreement using the companies' fully-diluted outstanding shares as of December 31, 2019. Under the Exchange Ratio formula in the Merger Agreement, the former Tarveda equity holders immediately before the Effective Time are expected to own approximately 75% of the outstanding capital stock of Organovo on a fully-diluted basis, and the stockholders of Organovo immediately before the Effective Time are expected to own approximately 25% of the outstanding capital stock of Organovo on a fully-diluted basis, subject to adjustment based upon whether Organovo's net cash at the closing of the Merger is greater or less than $22.0 million, the $1.5 million adjustment to Organovo's valuation per the terms of the Amendment to Merger Agreement and other potential adjustments.

Because, among other things, the number of shares of Organovo common stock issuable to Tarveda's securityholders is determined based on Organovo's net cash balance on the business day prior to the Closing and the capitalization of Tarveda and Organovo at the Closing, Organovo's securityholders cannot be certain of the exact number of shares that will be issued to (or reserved for issuance to) Tarveda's securityholders when Organovo's stockholders vote on the proposals at the Special Meeting. The Exchange Ratio referenced above is an estimate only and the final Exchange Ratio will be determined pursuant to a formula described in more detail in the Merger Agreement, the Amendment to Merger Agreement and in this proxy statement/prospectus/information statement.

2. Basis of Presentation

The accompanying unaudited pro forma combined financial information was prepared in accordance with Article 11 of SEC Regulation S-X. The unaudited pro forma combined balance sheet as of December 31, 2019 was prepared using the historical balance sheets of Tarveda and Organovo as of December 31, 2019 and gives effect to the Merger as if it occurred on December 31, 2019. The unaudited pro forma combined statements of operations and comprehensive loss for the year ended March 31, 2019 and the nine months ended December 31, 2019 give effect to the Merger as if it occurred on April 1, 2018 and were prepared using:

- the historical audited financial statements of Tarveda for the year ended March 31, 2019;
- the historical audited consolidated financial statements of Organovo for the year ended March 31, 2019;
- the historical unaudited financial statements of Tarveda for the nine months ended December 31, 2019; and
- the historical unaudited condensed consolidated financial statements of Organovo for the nine months ended December 31, 2019.

The unaudited pro forma combined financial information does not include the impact of any revenue, cost or other operating synergies that may result from the Merger or any related restructuring costs that may be contemplated and does not give effect to the proposed Organovo Reverse Stock Split because the proposed reverse stock split is a range, is not definitive and is subject to approval by Organovo's stockholders.

For accounting purposes, Tarveda is considered to be the acquiring company and the Merger is expected to be accounted for as a reverse recapitalization of Organovo by Tarveda because on the Merger date, the primary

pre-combination assets of Organovo are expected to be cash and short-term investments. The purchase consideration for the net assets of Organovo will be determined based on a net cash calculation prior to Closing. The estimated purchase price consideration for Organovo is approximately $51.9 million, solely to the extent that Organovo's net cash at Closing is $22.0 million. For purposes of these pro forma financial statements, this estimated purchase price consideration consists of the following:

Estimated number of shares of the combined organization to be owned by Organovo stockholders (1)	130,497,563
Multiplied by the assumed price per share of Organovo common stock (2)	$ 0.36
Estimated fair value of shares of combined organization to be owned by Organovo stockholders	$ 46,979,123
Estimated fair value of assumed Organovo equity awards based on precombination service (3)	4,923,726
Estimated purchase price	$ 51,902,849

(1) Reflects the number of outstanding common shares of the combined organization to be owned by Organovo stockholders based on Organovo's total outstanding common shares as of December 31, 2019.

(2) Reflects the assumed price per share of Organovo common stock, which is the closing trading price of Organovo common stock on December 31, 2019, the date of the unaudited pro forma financial statements.

(3) Reflects the estimated acquisition-date fair value of the assumed Organovo equity awards attributable to precombination service (which amount will be determined based on the closing trading price of Organovo common stock on December 31, 2019, the number of Organovo equity awards outstanding on this date, and the period of service provided by the holders of the awards prior to the merger closing date in 2020).

A 10% increase from the closing trading price of Organovo common stock on December 31, 2019 would cause an increase in the fair value of consideration transferred by approximately $4.7 million. A 10% decrease from the closing trading price of Organovo common stock on December 31, 2019 would cause a decrease in the fair value of consideration transferred by approximately $4.7 million.

The purchase consideration will be adjusted dollar-for-dollar by the amount that the net cash amount is less than or greater to $22.0 million as well as for the $1.5 million adjustment to Organovo's valuation per the terms of the Amendment to Merger Agreement. The pro forma financial statements reflect management's estimates of the fair value of Organovo's net assets that will be contributed to Tarveda as part of the Merger and assume Organovo has exactly $22.0 million of cash as of Closing and do not consider the positive adjustment of $1.5 million to Organovo's valuation as described above. However, the actual purchase consideration will vary based on the net cash calculation prior to Closing and the Exchange Ratio as described above and that difference could be material. As such, the estimated purchase consideration reflected in these unaudited pro forma condensed combined financial statements does not purport to represent what the actual purchase consideration will be when the Merger is completed.

Under reverse recapitalization accounting, the cost of asset acquisition will be allocated to the individual assets acquired or liabilities assumed, based on their relative fair values. No material goodwill or intangible assets are expected to be recognized and any excess consideration transferred over the fair value of the net assets of Organovo following determination of the actual purchase consideration for Organovo will be reflected as an adjustment to equity. Consequently, the financial statements of Tarveda reflect the operations of the acquirer for accounting purposes together with a deemed issuance of shares, equivalent to the shares held by the former stockholders of the legal acquirer and a recapitalization of the equity of the accounting acquirer. The historical financial statements of Organovo, which are contained in Organovo's annual report on Form 10-K for the year ended March 31, 2019 and quarterly report on Form 10-Q for the nine months ended December 31, 2019 that Organovo previously filed with the SEC and that are incorporated by reference into this proxy statement/prospectus/information statement, and Tarveda, which are provided elsewhere in this proxy statement/prospectus/information, have been adjusted to give pro forma effect to events that are (i) directly attributable to

the Merger, (ii) factually supportable, and (iii) with respect to the statements of operations, expected to have a continuing impact on the combined results. The historical financial statements of Tarveda shall become the historical financial statements of the combined organization.

To the extent there are significant changes to the business following completion of the Merger, the assumptions and estimates set forth in the unaudited pro forma condensed consolidated financial statements could change significantly. Accordingly, the pro forma adjustments are subject to further adjustments as additional information becomes available and as additional analyses are conducted following the completion of the Merger. There can be no assurances that these additional analyses will not result in material changes to the estimates of fair value.

3. Shares of Organovo Common Stock Issued to Tarveda Stockholders upon Closing of the Merger

Prior to the Merger, all outstanding shares of Tarveda preferred stock are expected to be converted into Tarveda common stock, which will be exchanged for shares of Organovo common stock as described above. The number of shares of common stock Organovo will issue to Tarveda securityholders, for purposes of these pro forma financial statements as of December 31, 2019, is calculated pursuant to the terms of the Merger Agreement, using an Exchange Ratio that assumes Organovo has exactly $22.0 million of cash as of Closing, excluding the $1.5 million adjustment to Organovo's valuation per the terms of the Amendment to Merger Agreement and assuming the conversion of the Existing Preferred Stock into Tarveda common stock all had occurred on December 31, 2019, as follows:

Fully-diluted shares of Organovo as of December 31, 2019[1]	147,159,152
Divided by the assumed Organovo ownership percentage ownership of combined organization	25%
Estimated fully-diluted adjusted total shares of common stock of combined organization	588,636,608
Less: fully-diluted shares of Organovo as of December 31, 2019[1]	147,159,152
Total fully-diluted shares of combined organization to be allocated to Tarveda securityholders	441,477,456

1 Includes all outstanding restricted stock units, performance-based restricted stock units, stock options, and warrants to purchase common stock.

The fully-diluted shares of the combined organization shall be allocated to Tarveda securityholders using the Exchange Ratio described above.

4. Adjustments to Unaudited Pro Forma Combined Balance Sheet as of December 31, 2019

The unaudited pro forma combined balance sheet includes pro forma adjustments that are (1) directly attributable to the Merger and (2) factually supportable. Based on Tarveda management's review of Organovo's summary of significant accounting policies, the nature and amount of any adjustments to the historical financial statements of Organovo to conform to the accounting policies of Tarveda are not expected to be significant. The unaudited pro forma combined balance sheet does not reflect the proposed Organovo Reverse Stock Split. The pro forma adjustments, based on preliminary estimates that could change materially as additional information is obtained, are as follows:

A. To convert 12,382,559 shares of Tarveda Series 1 Preferred and 52,784,899 shares of Tarveda Series CS Preferred into Tarveda common stock immediately prior to the Merger.

B. Reflects accrual of $7.1 million estimated unpaid transaction costs in connection with the Merger.

C. Reflects the reclassification of Tarveda's warrant liability of $0.2 million to additional paid-in capital as a result of the conversion of the warrant being exercisable for Tarveda common stock rather than Tarveda's preferred stock, also eliminating the change in fair value of Tarveda's warrant liability.

D. Reflects the post-combination compensation expense of $3.5 million related to severance and retention benefits that will be incurred upon termination of employment without cause or upon resignation for good reason subsequent to the Merger. This amount is excluded from the unaudited pro forma condensed combined statements of operations because it is a charge directly attributable to the Merger that will not have a continuing impact on the combined organization's operations; however, the amount is reflected as an increase to accumulated deficit in the unaudited pro forma balance sheet because the amounts are directly attributable to the Merger.

E. To record (i) the conversion of Tarveda's outstanding preferred stock and Series CS preferred stock into 3,258,373,900 shares of common stock, (ii) the payment of transaction costs associated with the Merger, (iii) the elimination of Tarveda's existing warrant liability, (iv) the payment of severance and retention bonuses upon the closing of the Merger, (v) the stock-based compensation costs associated with the acceleration of vesting of certain Organovo restricted stock and option awards upon the closing of the Merger, (vi) the elimination of Organovo's historical equity, including 130,497,563 outstanding shares of common stock at their par value of $0.1 million, (vii) the exchange of outstanding Tarveda common stock into 441,477,456 shares of Organovo common stock based on the assumed exchange ratio for purposes of these pro forma combined financial statements, and (viii) the effect of the reverse recapitalization of Organovo for a total of $28.9 million, which is the net carrying value of Organovo as of December 31, 2019.

	Common Stock						
(amounts in thousands, except share amounts)	Tarveda Shares	Amount	Organovo Shares	Amount	Additional Paid-In-Capital	Accumulated Deficit	Total Stockholders' Equity
Conversion of outstanding Tarveda preferred stock and Series CS into common stock	3,258,372,900	$ 3,258	—	$ —	$ 10,424	$ —	$ 13,677
Payment of transaction costs	—	—	—	—	—	(7,123)	(7,123)
Elimination of warrant liability	—	—	—	—	166	—	166
Payment of severance and retention bonuses	—	—	—	—	—	(3,546)	(3,546)
Stock-based compensation costs associated with accelerated vesting	—	—	—	—	4,924	(4,924)	—
Elimination of Organovo's historical equity carrying value	—	—	(130,497,563)	(130)	(305,566)	276,742	(28,954)
Exchange of outstanding Tarveda common stock into Organovo common stock based on the assumed exchange ratio	(3,294,486,669)	(3,262)	441,477,456	441	2,821	—	—
Reverse recapitalization of Organovo	—	—	130,497,563	130	28,824	—	28,954
Pro forma adjustment	(36,113,769)	$ (4)	441,477,456	$ 441	$ (258,408)	$ 261,149	$ 3,174

5. Adjustments to Unaudited Pro Forma Combined Statements of Operations for the Year Ended March 31, 2019 and the Nine Months Ended December 31, 2019

The unaudited pro forma combined statements of operations include pro forma adjustments that are (1) directly attributable to the Merger, (2) factually supportable and (3) expected to have a continuing impact on the results of operations of the combined organization. Based on Tarveda management's review of Organovo's summary of significant accounting policies, the nature and amount of any adjustments to the historical financial statements of Organovo to conform to the accounting policies of Tarveda are not expected to be significant. The unaudited pro forma combined statements of operations do not reflect the proposed Organovo Reverse Stock

Split. The pro forma adjustments, based on preliminary estimates that could change materially as additional information is obtained, are as follows:

F. To eliminate the impact of the change in the fair value of preferred stock warrant liability for warrants issued by Tarveda as it is assumed that all warrants would have become exercisable for Organovo common stock pursuant to the Merger Agreement. As a result, the preferred stock warrants would no longer be subject to fair value accounting following the assumed closing of the Merger.

G. To eliminate the impact of accruing dividends on Tarveda preferred stock in the determination of pro forma combined net loss attributable to common stockholders as it is assumed that all Tarveda preferred stock would have been converted into Tarveda common stock immediately prior to the Merger in accordance with its terms, and then converted into Organovo common stock pursuant to the Merger Agreement.

H. The pro forma combined basic and diluted earnings per share have been adjusted to reflect the pro forma net loss for the nine months ended December 31, 2019 and the year ended March 31, 2019. In addition, the number of shares used in calculating the pro forma combined basic and diluted net loss per share has been adjusted to include the estimated number of shares of common stock of the combined organization that would be issued to Tarveda stockholders as of the Closing based on the Exchange Ratio. The following table sets forth the calculation of the pro forma weighted average number of common shares outstanding — basic and diluted:

	Year Ended March 31, 2019	Nine Months Ended December 31, 2019
Weighted average common shares of Organovo issued for Tarveda common stock in connection with the Merger	425,508,079	426,423,500
	425,508,079	426,423,500
Weighted average common shares of Organovo outstanding	115,379,902	129,234,731
Pro forma combined weighted average number of common shares - basic and diluted	540,887,981	555,658,231

6. Items Not Included in the Unaudited Pro Forma Combined Financial Statements

The unaudited pro forma combined statements of operations do not include any non-recurring transaction costs incurred by Tarveda or Organovo after December 31, 2019 as those fees are not expected to have a continuing impact on the operations of the combined organization. They will be accrued for on the unaudited pro forma combined balance sheet as of December 31, 2019.

COMPARISON OF RIGHTS OF HOLDERS OF ORGANOVO STOCK AND TARVEDA STOCK

Both Organovo and Tarveda are incorporated under the laws of the State of Delaware and, accordingly, the rights of the stockholders of each are currently, and will continue to be, governed by the DGCL. If the Merger is completed, Tarveda stockholders will become stockholders of Organovo, and their rights will be governed by the DGCL, the bylaws of Organovo and, assuming Organovo Proposal No. 2 is approved by the Organovo stockholders at the Organovo special meeting, the certificate of incorporation of Organovo, as amended by the certificate of amendment attached to this proxy statement/prospectus/information statement as *Annex D*.

The table below summarizes the material differences between the current rights of Tarveda stockholders under the Tarveda amended and restated certificate of incorporation, as proposed to be amended in connection with the Tarveda financing concurrent with the Merger, and Tarveda bylaws, as amended, and the rights of Organovo stockholders, post-Merger, under the Organovo amended and restated certificate of incorporation and bylaws, each as amended, as applicable, and as in effect immediately following the Merger, as well as certain rights of Tarveda's stockholders pursuant to certain agreements.

While Organovo and Tarveda believe that the summary tables cover the material differences between the rights of their respective stockholders prior to the Merger and the rights of Organovo stockholders following the Merger, these summary tables may not contain all of the information that is important to you. These summaries are not intended to be a complete discussion of the respective rights of Organovo and Tarveda stockholders and are qualified in their entirety by reference to the DGCL and the various documents of Organovo and Tarveda that are referred to in the summaries. You should carefully read this entire proxy statement/prospectus/information statement and the other documents referred to in this proxy statement/prospectus/information statement for a more complete understanding of the differences between being a stockholder of Organovo or Tarveda before the Merger and being a stockholder of Organovo after the Merger. Organovo has filed copies of its current certificate of incorporation, as amended, and bylaws with the SEC and will send copies of the documents referred to in this proxy statement/prospectus/information statement to you upon your request. Tarveda will also send copies of its documents referred to in this proxy statement/prospectus/information statement to you upon your request. See the sections titled "*Where You Can Find More Information*" and "*Incorporation of Certain Documents By Reference*" in this proxy statement/prospectus/information statement.

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
ELECTIONS; VOTING; PROCEDURAL MATTERS		
Authorized Capital Stock	The fourth amended and restated certificate of incorporation of Tarveda authorizes the issuance of up to 3,483,900,000 shares of common stock, $0.0001 par value per share, and 117,147,928 shares of preferred stock, $0.0001 par value per share, of which 59,326 shares are designated "Series A Preferred Stock," 450,913 shares are designated "Series B Preferred Stock," 77,169 shares are designated "Series B-1 Preferred Stock," 24,629,117 shares are designated "Series C Preferred Stock," 26,627,713 shares are designated "Series D Preferred Stock", 12,518,789 shares are	The certificate of incorporation of Organovo authorizes the issuance of up to 200,000,000 shares of common stock, par value $0.001 per share, and 25,000,000 shares of preferred stock, par value $0.001 per share.

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
	designated “Series 1 Preferred Stock” and 52,784,901 shares are designated “Series CS Preferred Stock.”	
Number of Directors	The bylaws of Tarveda currently provide that the number of directors that shall constitute the whole board of directors shall be fixed from time to time by resolution of the board of directors, but shall consist of not less than one member. The fourth amended and restated certificate of incorporation of Tarveda provides that the number of directors shall initially be fixed at eight (8).	The certificate of incorporation and bylaws of Organovo currently provide that the number of directors that shall constitute the whole board of directors shall be fixed exclusively by one or more resolutions adopted from time to time by the board of directors.
Stockholder Nominations and Proposals	The fourth amended and restated certificate of incorporation and bylaws of Tarveda do not provide for procedures with respect to stockholder proposals or director nominations.	The bylaws of Organovo provide that in order for a stockholder to make a director nomination or propose business at an annual meeting of stockholders, the stockholder must give timely written notice to the Organovo secretary, which must be received no earlier than the close of business on the 75th day nor later than the close of business on the 45th day prior to the first anniversary on which Organovo first mailed its proxy materials for the preceding year’s annual meeting (with certain adjustments if no annual meeting was held the previous year or the date of the annual meeting is changed by more than 30 days before or more than 60 days after the first anniversary of the preceding year’s annual meeting).
Classified Board of Directors	The fourth amended and restated certificate of incorporation of Tarveda does not provide for the division of the board of directors into staggered classes.	The certificate of incorporation of Organovo provides that the directors comprising the Organovo board of directors is divided into three staggered class, with each class serving a three-year term.

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
Removal of Directors	Directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote for such director at an election of directors pursuant to the fourth amended and restated certificate of incorporation of Tarveda. Pursuant to the fifth amended and restated voting agreement of Tarveda, the holders of Tarveda's preferred stock and certain holders of Tarveda's common stock have agreed to vote to remove any director elected pursuant to the fifth amended and restated voting agreement at the request of any party or parties who had the right to designate such director.	Under the bylaws of Organovo, a director may be removed from office at any time, but only for cause.
Special Meeting of the Stockholders	The bylaws of Tarveda provide that special meetings of stockholders may be called at any time by the board of directors.	The certificate of incorporation and bylaws of Organovo provide that a special meeting of the stockholders may be called by the Organovo board of directors, the chairman of the Organovo board of directors, the chief executive officer or president (in the absence of a chief executive officer).
Cumulative Voting	The fourth amended and restated certificate of incorporation and bylaws of Tarveda do not have a provision granting cumulative voting rights in the election of its directors.	The Organovo certificate of incorporation and bylaws do not have a provision granting cumulative voting rights in the election of its directors.
Vacancies	The bylaws of Tarveda provide that any vacancy on the board of directors may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director.	The amended and restated certificate of incorporation and bylaws of Organovo provide that any vacancy or newly created directorships on the board of directors may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director.
Voting Stock	Under the fourth amended and restated certificate of incorporation of Tarveda, the holders of common stock are	Under the certificate of incorporation and bylaws of Organovo, the holders of common stock are entitled to one vote on

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
	entitled to one vote for each share of stock held by them and holders of preferred stock are entitled to the number of votes equal to number of shares of common stock into which such shares of preferred stock are convertible; provided that (i) at all times during which shares of preferred stock remain outstanding, the holders of Tarveda's Series 1 preferred stock, voting as a separate class, are entitled to elect three directors of Tarveda and (ii) the holders of the outstanding shares of Tarveda's common stock have the exclusive right, separately from the holders of shares of Tarveda's preferred stock, to elect two directors of Tarveda. Additional members of the board of directors shall be elected by the vote of the holders of common stock, Series 1 Preferred Stock and Series CS Preferred Stock, voting together as a single class.	each matter submitted to a vote at a meeting of the stockholders. The certificate of incorporation of Organovo provides that the Organovo board of directors is authorized, subject to limitations prescribed by law, provide for the issuance of shares of Organovo preferred stock in one or more series and to fix the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, of any wholly unissued series of preferred stock, including without limitation the dividend rights, dividend rate, conversion rights, voting rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such series.
Voting Agreement	The fifth amended and restated voting agreement provides for the election of eight (8) directors. Under the terms of this voting agreement, Tarveda's preferred stockholders and certain of Tarveda's common stockholders agreed to vote their respective shares so as to elect: (a) one Series 1 Preferred Stock director designated by NanoDimension L.P. and its affiliated entities for so long as such holders continue to hold any shares of Tarveda's preferred stock; (b) one Series 1 Preferred Stock director designated by Novo Holdings A/S and its affiliated entities for so long as such holders continue to hold any shares of Tarveda's preferred stock; (c) one Series 1 Preferred Stock director designated by Versant Venture	Organovo does not have a voting agreement or similar agreement with any of its stockholders in place.

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
	Capital V, L.P. and its affiliated entities for so long as such holders continue to hold any shares of Tarveda's preferred stock; (d) two common directors, one of whom is the Chief Executive Officer of Tarveda and one of whom is designated by the holders of a majority of the outstanding shares of Tarveda's common stock; and (e) three at-large directors, one of whom is designated by a majority of the other directors after a determination by Tarveda's board that such director is independent and two of whom are designated by a majority of the other directors. The voting agreement will automatically terminate immediately prior to the closing of the Merger.	
Right of First Refusal	The fifth amended and restated right of first refusal and co-sale agreement of Tarveda provides that certain holders of common stock wishing to transfer any shares of common stock must, subject to certain exemptions, first provide Tarveda and then the holders of preferred stock with the opportunity to purchase such shares. The right of first refusal will terminate upon consummation of the Merger.	Organovo does not have a right of first refusal in place.
Tag Along	Under fifth amended and restated right of first refusal and co-sale agreement, and subject to certain limitations, following the expiration of any Rights of First Refusal described under "Right of First Refusal" above, if certain holders of common stock propose to transfer shares of common stock, then any holder of preferred stock shall have the right to participate in such contemplated transfer. The tag along rights will terminate upon consummation of the Merger.	Organovo does not have tag along terms in place.

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
Drag Along	Under the fifth amended and restated voting agreement, if (i) a majority of the board of directors, (ii) the holders of at least a majority of the then-outstanding Series 1 Preferred Stock, (iii) the holders of a majority of the shares of common stock held by certain holders of common stock who are party to the voting agreement approve a sale of the company, each stockholder party to voting agreement is required to vote in favor of, and otherwise facilitate, such transaction or sell their shares, as applicable.	Organovo does not have drag along terms in place.
Registration Rights	Tarveda is a party to a fifth amended and restated investors' rights agreement that provides that holders of its preferred stock, including certain holders of 5% of its capital stock and entities affiliated with certain of its directors, and certain holders of its common stock have certain registration rights, including the right to demand that Tarveda file a registration statement, so called "demand" registration rights, or request that their shares be covered by a registration statement that Tarveda is otherwise filing, so-called "piggyback" registration rights.	Registration rights of Tarveda stockholders will survive the Merger and certain holders of Organovo's common stock and entities affiliated with certain of Organovo's directors will have the right to demand that Organovo file a registration statement, so called "demand" registration rights, or request that their shares be covered by a registration statement that Organovo is otherwise filing, so-called "piggyback" registration rights.
Stockholder Action by Written Consent	The bylaws of Tarveda provide that any action required or permitted to be taken by stockholders may be taken without a meeting, without prior notice and an actual meeting, if a consent in writing, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote on such action were present and voted.	The certificate of incorporation and bylaws of Organovo provide that, subject to the rights of the holders of any series of preferred stock, stockholders may take action by written consent if the action to be effected by written consent and the taking of such action by written consent is approved in advance by resolution of the Organovo board of directors.

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
Notice of Stockholder Meeting	The bylaws of Tarveda provide that notices of all meetings shall state the place, if any, date and time of the meeting and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting. The notice of a special meeting shall state, in addition, the purpose or purposes for which the meeting is called. The bylaws of Tarveda provide that notice of each meeting of stockholders shall be given not less than ten nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting.	Under the bylaws of Organovo, written notice of each stockholder meeting must specify the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, the record date for determining the stockholders entitled to cote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Notice shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting.
Conversion Rights and Protective Provisions	The fourth amended and restated certificate of incorporation of Tarveda provides that each holder of shares of preferred stock shall have the right to convert such shares into shares of common stock at any time in accordance with the fourth amended and restated certificate of incorporation. In addition, immediately prior to the closing of the Merger or upon the closing of the sale of shares of common stock in a firm-commitment underwritten public offering resulting in at least $30 million of proceeds all outstanding shares of preferred shall be converted into shares of common stock. Additionally, each share of Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series C Preferred Stock and Series D Preferred Stock shall	The certificate of incorporation of Organovo does not provide that holders of Organovo stock shall have preemptive, conversion or other protective rights. The certificate of incorporation of Organovo provides that the Organovo board of directors is authorized, subject to limitations prescribed by law, provide for the issuance of shares of Organovo preferred stock in one or more series and to fix the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, of any wholly unissued series of preferred stock, including without limitation the dividend rights, dividend rate, conversion rights, voting rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such series.

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
	automatically be converted into shares of common stock upon the written consent of the holders of at least sixty percent (60%) of the issued and outstanding shares of such series of preferred stock; each share of Series 1 Preferred Stock shall automatically be converted into shares of common stock upon the written consent of the holders of at least a majority of the issued and outstanding shares of Series 1 Preferred Stock; and each share of Series CS Preferred Stock shall automatically be converted into shares of common stock upon the automatic conversion of Series 1 Preferred Stock into common stock. For so long as at least twenty-five percent (25%) of the currently issued and outstanding shares of a series of Series A Preferred Stock, Series B Preferred Stock or Series B-1 Preferred Stock remain outstanding, Tarveda may not amend the fourth amended and restated certificate of incorporation or bylaws in any manner, or change the rights, preferences or privileges of such series of preferred stock without the written consent or affirmative vote of holders of at least fifty-five percent (55%) of the shares of such series of preferred stock then outstanding. For so long as at least twenty-five percent (25%) of the currently issued and outstanding shares of a series of Series C Preferred Stock, Series D Preferred Stock or Series 1 Preferred Stock remain outstanding, Tarveda may not amend the fourth amended and restated certificate of incorporation or bylaws in any manner, or change the rights, preferences or privileges of such series of preferred stock without	

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
	the written consent or affirmative vote of holders of at least a majority of the shares of Series 1 Preferred Stock then outstanding. The holders of Tarveda preferred stock also have other protective rights, such as approval of certain loans and establishment of subsidiaries.	
INDEMNIFICATION OF OFFICERS AND DIRECTORS AND ADVANCEMENT OF EXPENSES; LIMITATION ON PERSONAL LIABILITY		
Indemnification	The fourth amended and restated certificate of incorporation of Tarveda provides that Tarveda is authorized to indemnify its directors and officers to the fullest extent permitted by applicable law. Under its bylaws, Tarveda shall indemnify its directors and officers to the fullest extent permitted by the DGCL, upon determination of such person's good faith and conduct. Under the bylaws of Tarveda, such rights shall not be exclusive of any other rights acquired by directors and officers, including by agreement.	The certificate of incorporation and bylaws of Organovo provide that Organovo shall indemnify its directors and officers to the fullest extent permitted by the DGCL or any other applicable law. Under its bylaws, Organovo shall indemnify any director or officer in connection with a proceeding initiated by such person only if the proceeding was authorized by the Organovo board of directors. Under the bylaws of Organovo, such rights shall not be exclusive of any other rights acquired by directors and officers, including by agreement.
Advancement of Expenses	The bylaws of Tarveda provide that Tarveda shall pay the expenses incurred by a director or officer in defending any proceeding in advance of its final disposition at reasonable intervals upon receipt of an undertaking by the director or officer to repay all amounts advanced if it should be ultimately determined that such director or officer is not entitled to be indemnified.	The bylaws of Organovo provide that Organovo will advance expenses to any director or officer prior to the final disposition of the proceeding, provided, however, that such advancements shall be made only upon receipt of an undertaking by such director or officer to repay all amounts advanced if it should be ultimately determined that such director or officer is not entitled to indemnification under the bylaws of Organovo or otherwise.

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
	DIVIDENDS	
Declaration and Payment of Dividends	The fourth amended and restated certificate of incorporation of Tarveda provides that certain holders of preferred stock shall be entitled to receive dividends. Holders of Tarveda's Series C Preferred Stock, Series D Preferred Stock and Series 1 Preferred Stock are entitled to receive cumulative, non-compounding dividends from the date of issuance thereof at an annual rate of (i) $0.06 per share of Series C Preferred Stock, (ii) $0.06606 per share of Series D Preferred Stock (iii) and $0.06606 per share of Series 1 Preferred Stock. Holders of Tarveda's Series A Preferred Stock, Series B Preferred Stock and Series B-1 Preferred Stock are entitled to receive cumulative, non-compounding dividends from the date of issuance thereof at an annual rate of (i) $0.3087 per share of Series A Preferred Stock and (ii) $0.5248 per share of Series B Preferred Stock and Series B-1 Preferred Stock. Such dividends, as accrued and accumulated, increase the ratio into which shares of Tarveda's preferred stock convert into Tarveda common stock upon conversion immediately prior to the Merger. Dividends payable to holders of Tarveda's preferred stock will continue to accrue until the preferred stock is converted immediately prior to the Merger.	The bylaws of Organovo provide that, subject to any restrictions in applicable law or the amended and restated certificate of incorporation of Organovo, the board of directors may declare and pay dividends upon the shares of Organovo's capital stock.
	AMENDMENTS TO CERTIFICATE OF INCORPORATION OR BYLAWS	
General Provisions	For so long as at least twenty-five percent (25%) of the currently issued and outstanding shares of a series of Series A Preferred Stock, Series B Preferred Stock or Series	Except as provided in Article IX (relating to personal liability of directors of Organovo) and Article X (relating to indemnification of officers and directors of

Provision	Tarveda (Pre-Merger)	Organovo (Post-Merger)
	B-1 remain outstanding, Tarveda may not amend the fourth amended and restated certificate of incorporation or bylaws in any manner, or change the rights, preferences or privileges of such series of preferred stock without the written consent or affirmative vote of holders of at least fifty-five percent (55%) of the shares of such series of preferred stock then outstanding. For so long as at least twenty-five percent (25%) of the currently issued and outstanding shares of a series of Series C Preferred Stock, Series D Preferred Stock or Series 1 Preferred Stock remain outstanding, Tarveda may not amend the fourth amended and restated certificate of incorporation or bylaws in any manner, or change the rights, preferences or privileges of such series of preferred stock without the written consent or affirmative vote of holders of at least a majority of the shares of Series 1 Preferred Stock then outstanding. The bylaws of Tarveda provide that the bylaws may be amended by the affirmative vote of a majority of the directors and by the affirmative vote of the holders of a majority of the shares of the capital stock of the corporation issued and outstanding.	Organovo), the certificate of incorporation of Organovo may be amended in any manner otherwise permitted by law. The certificate of incorporation and bylaws of Organovo provide that the board of directors is expressly authorized to adopt, amend or repeal the bylaws; provided, however, that the bylaws may be adopted, amended or repealed by a majority of shares entitled to vote.

PRINCIPAL STOCKHOLDERS OF ORGANOVO

Except where specifically noted, the following information and all other information contained in this proxy statement/prospectus/information statement do not give effect to the proposed Organovo Reverse Stock Split described in Organovo Proposal No. 2.

The following table and related notes present information on the beneficial ownership of Organovo common stock as of December 31, 2019 by:

- each stockholder known by Organovo to beneficially own more than 5% of the outstanding shares of Organovo common stock;
- each director and named executive officer of Organovo; and
- all of Organovo's directors and named executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Shares of Organovo common stock that may be acquired by an individual or group within 60 days of December 31, 2019, pursuant to the exercise of options, warrants and RSUs, are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table.

The percentage of ownership is based on 130,497,563 shares of Organovo common stock outstanding as of December 31, 2019, adjusted as required by the rules promulgated by the SEC to determine beneficial ownership. Organovo does not know of any arrangements, including any pledge by any person of securities of Organovo.

Except as indicated in the footnotes to this table, Organovo believes that the stockholders named in this table have sole voting and investment power with respect to all shares of Organovo common stock shown as beneficially owned by them, subject to community property laws where applicable. Unless otherwise noted, the address of each director and current and former executive officer of Organovo is c/o Organovo Holdings, Inc., 440 Stevens Avenue, Suite 200, Solana Beach, California 92075.

Name of Beneficial Owner	Number of Shares Beneficially Owned(1)	%
Five Percent Stockholders (other than directors and officers):		
ARK Investment Management LLC (2)	18,059,829	13.8%
Named Executive Officers and Directors:		
Taylor Crouch (3)	2,258,683	1.7%
Jennifer Kinsbruner Bush, JD (4)	857,701	*
Craig Kussman (5)	804,200	*
Richard Maroun (6)	140,000	*
Mark Kessel (7)	140,000	*
David Shapiro, M.D. (8)	45,500	*
Carolyn Beaver (9)	47,834	*
Kirk Malloy (10)	207,500	*
All current executive officers and directors as a group (9 persons) (11)	4,501,418	3.4%

* Represents beneficial ownership of less than one percent (1%)

(1) Beneficial ownership of shares and percentage ownership are determined in accordance with the rules of the SEC. Unless otherwise indicated and subject to community property laws where applicable, the individuals named in the table above have sole voting and investment power with respect to all shares of Organovo common stock shown as beneficially owned by them.

(2) Based solely upon a Schedule 13G/A filed on February 14, 2019, by ARK Investment Management LLC, 3 East 28th Street, 7th Floor, New York, NY 10016. According to the Schedule 13G/A, ARK Investment Management LLC has sole voting power with respect to 17,929,634 shares of Organovo common stock, shared voting power with respect to 130,195 shares of Organovo common stock, sole dispositive power with respect to 17,929,634 shares of Organovo common stock, and shared dispositive power with respect to 130,195 shares of Organovo common stock. Catherine D. Wood, Chief Executive Officer and Chief Investment Officer of ARK Investment Management LLC has ultimate voting and investment control over the shares held by ARK Investment Management LLC.

(3) Includes options to purchase 2,204,396 shares of Organovo common stock currently exercisable or exercisable within 60 days of December 31, 2019. Does not include options to purchase 1,833,816 additional shares of Organovo common stock subject to future vesting pursuant to the terms of stock option agreements. Does not include 83,677 additional RSUs subject to future vesting pursuant to the terms of restricted stock unit agreements. An RSU represents a conditional right to receive one share of Organovo common stock at a specified future date. Does not include PBRSUs representing the right to receive up to 2,180,134 shares of Organovo common stock contingent upon Organovo's achievement of performance metrics. A PBRSU represents a conditional right to receive one share of Organovo common stock at a specified future date.

(4) Includes options to purchase 745,834 shares of Organovo common stock currently exercisable or exercisable within 60 days of December 31, 2019. Does not include options to purchase 587,499 additional shares of Organovo common stock subject to future vesting pursuant to the terms of stock option agreements. Does not include 108,576 additional RSUs subject to future vesting pursuant to the terms of restricted stock unit agreements. An RSU represents a conditional right to receive one share of Organovo common stock at a specified future date. Does not include PBRSUs representing the right to receive up to 721,650 shares of Organovo common stock contingent upon Organovo's achievement of performance metrics. A PBRSU represents a conditional right to receive one share of Organovo's common stock at a specified future date.

(5) Includes options to purchase 673,125 shares of Organovo common stock currently exercisable or exercisable within 60 days of December 31, 2019. Does not include options to purchase 631,875 additional shares of Organovo common stock subject to future vesting pursuant to the terms of stock option agreements. Does not include 127,088 additional RSUs subject to future vesting pursuant to the terms of restricted stock unit agreements. An RSU represents a conditional right to receive one share of Organovo common stock at a specified future date. Does not include PBRSUs representing the right to receive up to 806,550 shares of Organovo common stock contingent upon Organovo's achievement of performance metrics. A PBRSU represents a conditional right to receive one share of Organovo common stock at a specified future date.

(6) Includes options to purchase 125,000 shares of Organovo common stock currently exercisable or exercisable within 60 days of December 31, 2019.

(7) Includes options to purchase 125,000 shares of Organovo common stock currently exercisable or exercisable within 60 days of December 31, 2019.

(8) Includes options to purchase 45,500 shares of Organovo common stock currently exercisable or exercisable within 60 days of December 31, 2019. Does not include options to purchase 83,000 additional shares of Organovo common stock subject to future vesting pursuant to the terms of stock option agreements.

(9) Includes options to purchase 47,834 shares of Organovo common stock currently exercisable or exercisable within 60 days of December 31, 2019. Does not include options to purchase 86,666 additional shares of Organovo common stock subject to future vesting pursuant to the terms of stock option agreements.

(10) Includes options to purchase 200,000 shares of Organovo common stock currently exercisable or exercisable within 60 days of December 31, 2019. Does not include options to purchase 52,000 additional shares of Organovo common stock subject to future vesting pursuant to the terms of stock option agreements.

(11) Includes options to purchase 4,166,689 shares of Organovo common stock currently exercisable or exercisable within 60 days of December 31, 2019. Does not include options to purchase 3,378,856 additional shares of Organovo common stock subject to future vesting pursuant to the terms of stock option agreements. Does not include 319,341 additional RSUs subject to future vesting pursuant to the terms of restricted stock unit agreements. An RSU represents a conditional right to receive one share of Organovo common stock at a specified future date. Does not include performance-based restricted stock unit awards representing the right to receive up to 3,708,334 shares of Organovo common stock contingent upon Organovo's achievement of various performance metrics. A PBRSU represents a conditional right to receive one share of Organovo common stock at a specified future date.

PRINCIPAL STOCKHOLDERS OF TARVEDA

The following table and the related notes present information on the beneficial ownership of Tarveda's common stock on an as-converted basis as of December 31, 2019 by:

- each stockholder known by Tarveda to beneficially own more than 5% of the outstanding shares of Tarveda common stock on an as-converted basis;
- each director and executive officer of Tarveda; and
- all of Tarveda's current directors and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Shares of Tarveda common stock that may be acquired by an individual or group within 60 days of December 31, 2019, pursuant to the exercise of options or warrants, are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table.

The percentage ownership is based on 3,294,486,769 shares of Tarveda common stock outstanding as of December 31, 2019 assuming the automatic conversion of all outstanding shares of Tarveda's preferred stock into an aggregate of 3,258,373,000 shares of Tarveda's common stock immediately prior to the closing of the Merger, and as further adjusted as required by the rules promulgated by the SEC to determine beneficial ownership. Tarveda does not know of any arrangements, including any pledge by any person of securities of Tarveda.

Except as indicated in footnotes to this table, Tarveda believes that the stockholders named in this table have sole voting and investment power with respect to all shares of Tarveda common stock shown as beneficially owned by them, based on information provided to Tarveda by such stockholders and subject to community property laws where applicable. Unless otherwise indicated, the address for each stockholder listed is: c/o Tarveda Therapeutics, Inc., 134 Coolidge Avenue, Watertown, Massachusetts 02472.

Name of Beneficial Owner	Number of Shares Beneficially Owned	%
Five Percent Stockholders (other than directors and officers):		
Novo Holdings A/S (1)	1,305,642,100	39.6%
Entities affiliated with Versant Ventures (2)	1,017,385,950	30.9%
Entities affiliated with NanoDimension (3)	783,783,400	23.8%
Named Executive Officers and Directors:		
Andrew J. Fromkin (4)	43,132,475	1.3%
Jeffrey D. Bloss, M.D. (5)	486,930	*
Brian K. Roberts (6)	578,731	*
Dennis Ausiello (7)	131,129	*
Nilesh Kumar, Ph.D.	—	*
Guido Magni, M.D., Ph.D. (2)	1,017,385,950	30.9%
Michael A. Metzger (8)	136,458	*
Aymeric Sallin, M.S	—	*
All current executive officers and directors as a group (10 persons) (9)	1,063,707,956	32.2%

* Represents beneficial ownership of less than one percent (1%)

(1) Consists of 254,265,850 shares of Tarveda common stock issuable upon conversion of 5,085,317 shares of Tarveda Series 1 Preferred Stock and 1,051,376,250 shares of Tarveda common stock issuable upon conversion of 21,027,525 shares of Tarveda Series CS Preferred Stock, all of which are held directly by Novo Holdings A/S. Novo Holdings A/S is a Danish limited liability company wholly-owned by the Novo Nordisk Foundation. The board of directors of Novo Holdings A/S has shared investment and voting control with respect to the shares held by Novo Holdings A/S and may exercise and control only with the support of a majority of the members of the Novo Holdings A/S board of directors. As such, no individual member of the Novo Holdings A/S Board is deemed to hold any beneficial ownership or reportable pecuniary interest in the shares held by Novo Holdings A/S. The address of Novo Holdings A/S is Tuborg Havnevej 19, Hallerup, Denmark DK-2900.

(2) Consists of (i) 173,877,000 shares of Tarveda common stock issuable upon conversion of 3,477,540 shares of Tarveda Series 1 Preferred Stock and718,972,350 shares of Tarveda common stock issuable upon conversion of 14,379,447 shares of Tarveda Series CS Preferred Stock, all of which are held directly by Versant Venture Capital V, L.P. (“VVC V”), (ii) 13,232,900 shares of Tarveda common stock issuable upon conversion of 264,658 shares of Tarveda Series 1 Preferred Stock and 54,717,350 shares of Tarveda common stock issuable upon conversion of 1,094,347 shares of Tarveda Series CS Preferred Stock, all of which are held directly by Versant Venture Capital V (Canada) LP (“VVC CAN”), (iii) 5,789,550 shares of Tarveda common stock issuable upon conversion of 115,791 shares of Tarveda Series 1 Preferred Stock and 23,939,500 shares of Tarveda common stock issuable upon conversion of 478,790 shares of Tarveda Series CS Preferred Stock, all of which are held directly by Versant Ophthalmic Affiliates Fund I, L.P. (“VOA”), and (iv) 5,230,300 shares of Tarveda common stock issuable upon conversion of 104,606 shares of Tarveda Series 1 Preferred Stock and 21,627,000 shares of Tarveda common stock issuable upon conversion of 432,540 shares of Tarveda Series CS Preferred Stock, all of which are held directly by Versant Affiliates Fund V, L.P. (“VAF V”). Versant Ventures V, LLC (“VV V”), serves as the sole general partner of VOA, VAF V and VVC V and owns no shares directly. Versant Ventures V (Canada) GP-GP, Inc. (“VV V CAN GP”), serves as the sole general partner of Versant Ventures V (Canada), L.P. (“VV V CAN”), which serves as the sole general partner of VVC CAN, and owns no shares directly. Samuel D. Colella, William J. Link, Bradley Bolzon, Ph.D., Robin L. Praeger, Kirk G. Nielson and Thomas Woiwode, Ph.D. are managing directors of VV V and directors of VV V CAN GP and share voting and dispositive power over the shares held by VOA, VAF V, VVC V and VVC CAN; however, they each disclaim beneficial ownership of the shares held by VOA, VAF V, VVC V and VVC CAN, except to the extent of their respective pecuniary interest therein. Guido Magni, a partner of Versant Venture Management, LLC, does not share voting and investment power over the shares held of record by held by VOA, VAF V, VVC V and VVC CAN. Dr. Magni disclaims beneficial ownership of all shares held by held by VOA, VAF V, VVC V and VVC CAN except to the extent of his pecuniary interest therein. Dr. Magni is a member of Tarveda’s board of directors. The address for each of the Versant Ventures entities is One Sansome Street, Suite 3630, San Francisco, CA 94104.

(3) Consists of (i) 47,078,100 shares of Tarveda common stock issuable upon conversion of 941,562 shares of Tarveda Series 1 Preferred Stock and 220,434,200 shares of Tarveda common stock issuable upon conversion of 4,408,684 shares of Tarveda Series CS Preferred Stock, all of which are held directly by NanoDimension, L.P. and (ii) 90,855,850 shares of Tarveda common stock issuable upon conversion of 1,817,117 shares of Tarveda Series 1 Preferred Stock and 425,415,250 shares of Tarveda common stock issuable upon conversion of 8,508,305 shares of Tarveda Series CS Preferred Stock held by NanoDimension II, L.P. NanoDimension Management Limited (“ND GP”) serves as the general partner of NanoDimension, L.P. and owns no shares directly. NanoDimension II GP Limited Partnership (“ND II GP LP”) serves as the general partner of Nanodimension II Management Limited, which serves as the general partner of NanoDimension II, L.P., and owns no shares directly. Jonathan Nicholson and Richard Coles are directors of each of ND GP and ND II GP LP and share voting and dispositive power over the shares held by NanoDimension, L.P. and NanoDimension II, L.P.; however, they each disclaim beneficial ownership of the shares held by NanoDimension, L.P. and NanoDimension II, L.P., except to the extent of their respective pecuniary interest therein. Aymeric Sallin is a member of the investment advisory committee of ND GP that provides investment recommendation to ND GP, although Mr. Sallin does not have the ability to direct the

voting or disposition of any such shares. Mr. Sallin is a member of Tarveda's board of directors. The address for each of the NanoDimension entities is c/o NanoDimension Management Limited, Governor's Square, Unit 3-213-6, 23 Lime Tree Bay Ave, Grand Cayman, Cayman Islands KY1-1302.

(4) Consists of (i) 1,555,050 shares of Tarveda common stock issuable upon conversion of 31,101 shares of Tarveda Series CS Preferred Stock, all of which are held directly by Mr. Fromkin, (ii) 7,456,400 shares of Tarveda common stock issuable upon conversion of 149,128 shares of Tarveda Series 1 Preferred Stock and 30,230,450 shares of Tarveda common stock issuable upon conversion of 604,609 shares of Tarveda Series CS Preferred Stock held by the Andrew J. Fromkin Family Trust, over which Mr. Fromkin is trustee/co-Trustee with his spouse and (iii) 3,890,575 shares of Tarveda common stock issuable upon the exercise of options held directly by Mr. Fromkin.

(5) Represents shares of Tarveda common stock issuable upon the exercise of options held directly by Dr. Bloss.

(6) Represents shares of Tarveda common stock issuable upon the exercise of options held directly by Mr. Roberts.

(7) Represents shares of Tarveda common stock issuable upon the exercise of options held by Mr. Ausiello.

(8) Represents shares of Tarveda common stock issuable upon the exercise of options held by Mr. Metzger.

(9) Includes (i) 205,586,150 shares of Tarveda common stock issuable upon conversion of 4,111,723 shares of Tarveda Series 1 Preferred Stock (ii) 851,041,700 shares of Tarveda common stock issuable upon conversion of 17,020,834 shares of Tarveda Series CS Preferred Stock and (iii) 17,080,106 shares of Tarveda common stock issuable upon the exercise of options.

PRINCIPAL STOCKHOLDERS OF COMBINED ORGANIZATION

Except where specifically noted, the following information and all other information contained in this proxy statement/prospectus/information statement do not give effect to the proposed Organovo Reverse Stock Split described in Organovo Proposal No. 2.

The following table and the related notes present information on the beneficial ownership of the combined organization's common stock immediately after the consummation of the Merger, applying the estimated exchange ratio and based on beneficial ownership as of December 31, 2019, by:

- each stockholder expected by Tarveda and Organovo to become the beneficial owner of more than 5% of the outstanding common stock of the combined organization;
- each director and named executive officer of the combined organization; and
- all of the combined organization's directors and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Shares of the combined organization common stock that may be acquired by an individual or group within 60 days of December 31, 2019, pursuant to the exercise of options or warrants, are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table.

The percentage ownership is based on 562,404,672 shares of common stock of the combined organization expected to be outstanding upon consummation of the Merger based on shares outstanding as of December 31, 2019, adjusted as required by the rules promulgated by the SEC to determine beneficial ownership. Neither Tarveda nor Organovo know of any arrangements, including any pledge by any person of securities of the combined organization.

Immediately after the consummation of the Merger, based on the Exchange Ratio, Tarveda stockholders, warrantholders and optionholders will own approximately 75% of the Organovo common stock on a fully diluted basis as defined in the Merger Agreement, with Organovo stockholders, optionholders and warrantholders holding approximately 25% of the Organovo common stock on a fully diluted basis as defined in the Merger Agreement. The following table and the related notes assume that, at the Effective Time, each share of Tarveda common stock will convert into the right to receive an estimated 0.1311 shares of Organovo common stock and to account for the occurrence of certain events discussed elsewhere in this proxy statement/prospectus/information statement. The estimated Exchange Ratio calculation used herein is based upon Organovo's capitalization numbers immediately prior to the date of this proxy statement/prospectus/information statement, and will be adjusted to account for the issuance of any additional shares of Organovo common stock prior to the closing of the Merger. See "*The Merger Agreement — Merger Consideration*" for more information regarding the Exchange Ratio.

Except as indicated in footnotes to this table, Tarveda and Organovo believe that the stockholders named in this table have sole voting and investment power with respect to all shares of common stock of the combined organization shown as beneficially owned by them, based on information provided to Tarveda and Organovo by such stockholder.

Unless otherwise indicated, the address for each stockholder listed is: c/o Tarveda Therapeutics, Inc., 134 Coolidge Avenue, Watertown, Massachusetts 02472.

Name of Beneficial Owner	Number of Shares Beneficially Owned	%
Five Percent Stockholders (other than directors and officers):		
Novo Holdings A/S (1)	171,169,674	30.4%
Entities affiliated with Versant Ventures (2)	133,379,293	23.7%
Entities affiliated with NanoDimension (3)	102,753,981	18.3%
Named Executive Officers and Directors:		
Andrew J. Fromkin (4)	5,654,665	1.0%
Jeffrey D. Bloss, M.D. (5)	63,836	*
Brian K. Roberts (6)	75,871	*
Dennis Ausiello (7)	17,188	*
Nilesh Kumar, Ph.D.	—	*
Guido Magni, M.D., Ph.D. (2)	133,379,293	23.7%
Michael A. Metzger (8)	18,024	*
Aymeric Sallin, M.S. (3)	—	*
Carolyn Beaver (9)	47,833	*
Mark Kessel (10)	140,000	*
All executive officers and directors as a group (12 persons) (11)	139,640,064	32.3%

* Represents beneficial ownership of less than one percent (1%)

(1) Novo Holdings A/S is a Danish limited liability company wholly-owned by the Novo Nordisk Foundation. The board of directors of Novo Holdings A/S has shared investment and voting control with respect to the shares held by Novo Holdings A/S and may exercise and control only with the support of a majority of the members of the Novo Holdings A/S board of directors. As such, no individual member of the Novo Holdings A/S Board is deemed to hold any beneficial ownership or reportable pecuniary interest in the shares held by Novo Holdings A/S. The address of Novo Holdings A/S is Tuborg Havnevej 19, Hallerup, Denmark DK-2900.

(2) Consists of (i) 117,052,548 shares to be held directly by VVC V, (ii) 8,908,277 shares to be held directly by VVC CAN, (iii) 3,897,478 shares to be held directly by VOA and (iv) 3,520,990 shares to be held directly by VAF V. VV V, serves as the sole general partner of VOA, VAF V and VVC V and owns no shares directly. VV V CAN GP serves as the sole general partner of VV V CAN, which serves as the sole general partner of VVC CAN, and owns no shares directly. Samuel D. Colella, William J. Link, Bradley Bolzon, Ph.D., Robin L. Praeger, Kirk G. Nielson and Thomas Woiwode, Ph.D. are managing directors of VV V and directors of VV V CAN GP and share voting and dispositive power over the shares held by VOA, VAF V, VVC V and VVC CAN; however, they each disclaim beneficial ownership of the shares held by VOA, VAF V, VVC V and VVC CAN, except to the extent of their respective pecuniary interest therein. Guido Magni, a partner of Versant Venture Management, LLC, does not share voting and investment power over the shares held of record by held by VOA, VAF V, VVC V and VVC CAN. Dr. Magni disclaims beneficial ownership of all shares held by held by VOA, VAF V, VVC V and VVC CAN except to the extent of his pecuniary interest therein. Dr. Magni is a member of Tarveda's board of directors. The address for each of the Versant Ventures entities is One Sansome Street, Suite 3630, San Francisco, CA 94104.

(3) Consists of (i) 67,683,130 shares to be held by NanoDimension, L.P. and (ii) 35,070,851 shares to be held by NanoDimension II, L.P. ND GP serves as the general partner of NanoDimension, L.P. and owns no shares directly. ND II GP LP serves as the general partner of Nanodimension II Management Limited, which serves as the general partner of NanoDimension II, L.P., and owns no shares directly. Jonathan Nicholson and Richard Coles are directors of each of ND GP and ND II GP LP and share voting and dispositive power over the shares held by NanoDimension, L.P. and NanoDimension II, L.P.; however, they each disclaim beneficial ownership of the shares held by NanoDimension, L.P. and NanoDimension II, L.P.,

except to the extent of their respective pecuniary interest therein. Aymeric Sallin is a member of the investment advisory committee of ND GP that provides investment recommendation to ND GP, although Mr. Sallin does not have the ability to direct the voting or disposition of any such shares. Mr. Sallin is a member of Tarveda's board of directors. The address for each of the NanoDimension entities is c/o NanoDimension Management Limited, Governor's Square, Unit 3-213-6, 23 Lime Tree Bay Ave, Grand Cayman, Cayman Islands KY1-1302.

(4) Consists of (i) 203,867 shares to be held directly by Mr. Fromkin, (ii) 4,940,745 shares to be held by the Andrew J. Fromkin Family Trust, over which Mr. Fromkin is trustee/co-Trustee with his spouse and (iii) 510,053 shares issuable upon the exercise of options held directly by Mr. Fromkin.

(5) Represents shares issuable upon the exercise of options held directly by Dr. Bloss.

(6) Represents shares issuable upon the exercise of options held directly by Mr. Roberts.

(7) Represents shares issuable upon the exercise of options held by Mr. Ausiello.

(8) Represents shares issuable upon the exercise of options held by Mr. Metzger.

(9) Represents shares issuable upon the exercise of options held by Ms. Beaver.

(10) Includes 125,000 shares issuable upon the exercise of options held by Mr. Kessel.

(11) Includes 1,101,159 shares issuable upon the exercise of options.

LEGAL MATTERS

Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, will pass upon the validity of the Organovo common stock offered by this proxy statement/prospectus/information statement. The material U.S. federal income tax consequences of the Merger will be passed upon for Organovo by Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP and for Tarveda by Cooley LLP.

EXPERTS

Mayer Hoffman McCann P.C., independent registered public accounting firm, has audited Organovo's consolidated financial statements included in its Annual Report on Form 10-K as of March 31, 2019 and 2018 and for the two years in the period ended March 31, 2019 and the effectiveness of Organovo's internal control over financial reporting as of March 31, 2019, as set forth in their reports, which include an explanatory paragraph related to the change in the method of accounting for revenue and are incorporated by reference in this joint proxy statement/prospectus/information statement and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance upon the reports of Mayer Hoffman McCann P.C., upon the authority of said firm as experts in accounting and auditing, in giving said reports.

The financial statements of Tarveda Therapeutics, Inc. as of March 31, 2019 and 2018, and for each of the years then ended, have been included in this proxy statement/prospectus/information statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, appearing elsewhere herein, and upon the authority of said firm as experts in accounting and auditing. The audit report covering the March 31, 2019 and 2018 financial statements contains an explanatory paragraph that states that Tarveda has suffered recurring losses from operations and has an accumulated deficit that raise substantial doubt about the entity's ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of that uncertainty.

WHERE YOU CAN FIND MORE INFORMATION

Organovo files annual, quarterly and special reports, proxy statements and other information with the SEC. Organovo's SEC filings are also available to the public over the Internet at the SEC's website at http://www.sec.gov.

As of the date of this proxy statement/prospectus/information statement, Organovo has filed a Registration Statement to register with the SEC the Organovo common stock that Organovo will issue to Tarveda stockholders in the Merger. This proxy statement/prospectus/information statement is a part of that Registration Statement and constitutes a prospectus of Organovo, as well as a proxy statement of Organovo for its special meeting and an information statement for the purpose of Tarveda for its written consent.

Organovo has supplied all information contained in this proxy statement/prospectus/information statement relating to Organovo, and Tarveda has supplied all information contained in this proxy statement/prospectus/information statement relating to Tarveda.

If you would like to request documents from Organovo or Tarveda, please send a request in writing or by telephone to either Organovo or Tarveda at the following addresses:

Organovo Holdings, Inc.
440 Stevens Avenue, Suite 200
Solana Beach, CA 92075

Telephone: (858) 224-1000

Attn: Secretary

Tarveda Therapeutics, Inc.
134 Coolidge Ave.
Watertown, MA 02472

Telephone: (617) 923-4100

Attn: Secretary

If you are an Organovo stockholder and would like additional copies, without charge, of this proxy statement/prospectus/information statement or if you have questions about the Merger, including the procedures for voting your shares, you should contact Organovo's proxy solicitor:

D.F. King & Co., Inc.
48 Wall Street
New York, NY 10005
Telephone: (800) 431-9646 (toll-free)
(212) 269-5550 (collect)
Email: ONVO@dfking.com

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows Organovo to incorporate certain information into this document by reference to other information that has been filed with the SEC. The information incorporated by reference is deemed to be part of this document, except for any information that is superseded by information in this document. The documents that are incorporated by reference contain important information about Organovo and you should read this document together with any other documents incorporated by reference in this document.

This document incorporates by reference the following documents that have previously been filed with the SEC by Organovo:

- Annual Report on Form 10-K for Organovo's fiscal year ended March 31, 2019;
- the information specifically incorporated by reference into Organovo's Annual Report on Form 10-K for the year ended March 31, 2019 from Organovo's definitive proxy statement filed pursuant to Section 14 of the Exchange Act in connection with Organovo's 2019 Annual Meeting of Stockholders filed with the SEC on July 26, 2019;
- Quarterly Reports on Form 10-Q for the quarters ended June 30, 2019, September 30, 2019 and December 31, 2019;
- Current Reports on Form 8-K filed June 28, 2019, July 9, 2019, August 7, 2019, September 5, 2019, October 3, 2019, October 11, 2019, December 16, 2019, December 30, 2019 and January 29, 2020 (other than the portions of those documents not deemed to be filed); and
- the description of Organovo's capital stock set forth in Form 8-A, filed with the SEC on July 26, 2016.

Organovo is incorporating by reference any documents it may file under Section 13(a), 13(c) 14 or 15(d) of the Exchange Act after the date of this document and prior to the date of the Organovo special meeting provided, however, that Organovo is not incorporating by reference any information furnished (but not filed), except as otherwise specified herein. Any statement contained herein or in a document incorporated or deemed to be incorporated herein by reference will be deemed to be modified or superseded for the purposes of this proxy statement/prospectus/information statement to the extent that a statement contained in any subsequently filed document which is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this proxy statement/prospectus/information statement.

You may obtain the information incorporated by reference and any other materials Organovo files with the SEC without charge by following the instructions in the section entitled "*Where You Can Find More Information*" in this proxy statement/prospectus/information statement.

TRADEMARK NOTICE

The Organovo logo is a registered and unregistered trademark of Organovo in the United States and other jurisdictions. “Tarveda Therapeutics,” “*Pentarin*”, the Tarveda logo and other trademarks, service marks and trade names of Tarveda are registered and unregistered marks of Tarveda Therapeutics, Inc. in the United States and other jurisdictions. Other third-party logos and product/trade names are registered trademarks or trade names of their respective companies.

OTHER MATTERS

Stockholder Proposals

Stockholders interested in submitting a proposal for consideration at Organovo’s 2020 annual meeting must do so by sending such proposal to Organovo’s Corporate Secretary at Organovo Holdings, Inc., 440 Stevens Avenue, Suite 200, Solana Beach, California 92075. Under the SEC’s proxy rules, the deadline for submission of proposals to be included in Organovo’s proxy materials for the 2020 annual meeting is March 27. Accordingly, in order for a stockholder proposal to be considered for inclusion in Organovo’s proxy materials for the 2020 annual meeting, any such stockholder proposal must be received by Organovo’s Corporate Secretary on or before March 27, 2020, and comply with the procedures and requirements set forth in Rule 14a-8 under the Securities Exchange Act of 1934, as well as the applicable requirements of Organovo’s bylaws. Any stockholder proposal received after March 27, 2020 will be considered untimely, and will not be included in Organovo’s proxy materials. In addition, stockholders interested in submitting a proposal outside of Rule 14a-8 must properly submit such a proposal in accordance with Organovo’s bylaws.

Organovo’s bylaws require advance notice of business to be brought before a stockholders’ meeting, including nominations of persons for election as directors. To be timely, notice to Organovo’s Corporate Secretary must be received at Organovo’s principal executive offices not less than 45 days but not more than 75 days prior to the first anniversary date on which Organovo first mailed its proxy materials for the preceding year’s annual meeting and must contain specified information concerning the matters to be brought before such meeting and concerning the stockholder proposing such matters. Therefore, to be presented at Organovo’s 2020 annual meeting, such a proposal must be received by Organovo on or after May 12, 2020 but no later than June 11, 2020. If the date of the 2020 annual meeting is advanced by more than 30 days, or delayed by more than 60 days, from the anniversary date of the 2019 Annual Meeting, notice must be received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the 10th day following the day on which the public announcement of the date of such meeting is first made.

Stockholder Communication with the Organovo Board of Directors

The Organovo board of director desires that the views of stockholders will be heard by the board of directors, its committees or individual directors, as applicable, and that appropriate responses will be provided to stockholders on a timely basis. Stockholders wishing to formally communicate with the Organovo board of directors, any committee of the Organovo board of directors, the independent directors as a group or any individual director may send communications directly to Organovo at 440 Stevens Avenue, Suite 200, Solana Beach, CA 92075, Attention: Corporate Secretary. All clearly marked written communications, other than unsolicited advertising or promotional materials, are logged and copied, and forwarded to the director(s) to whom the communication was addressed. Please note that the foregoing communication procedure does not apply to (i) stockholder proposals pursuant to Exchange Act Rule 14a-8 and communications made in connection with such proposals or (ii) service of process or any other notice in a legal proceeding.

Householding of Proxy Materials

The SEC has adopted rules known as “householding” that permit companies and intermediaries (such as brokers) to deliver one set of proxy materials to multiple stockholders residing at the same address. This process enables Organovo to reduce Organovo’s printing and distribution costs, and reduce Organovo’s environmental impact. Householding is available to both Organovo registered stockholders and beneficial owners of Organovo shares held in street name.

Organovo will promptly deliver a separate copy of either document to you upon written or oral request to Organovo Holdings, Inc., 440 Stevens Avenue, Suite 200, Solana Beach, California 92075, Attention: Investor Relations, Telephone: (858) 224-1000. If you want to receive separate copies of the proxy statement or annual report to stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker or other nominee record holder, or you may contact Organovo at the above address and phone number.

TARVEDA THERAPEUTICS, INC.

INDEX TO FINANCIAL STATEMENTS

Financial Statements:

Unaudited Interim Financial Statements:

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
Tarveda Therapeutics, Inc.:

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Tarveda Therapeutics, Inc. (the Company) as of March 31, 2019 and 2018, and the related statements of operations and comprehensive loss, redeemable convertible preferred stock and stockholders' deficit, and cash flows for each of the years then ended, and the related notes (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of March 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years then ended, in conformity with U.S. generally accepted accounting principles.

Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations and has an accumulated deficit that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2017.

Boston, Massachusetts
December 23, 2019

Tarveda Therapeutics, Inc.
Balance Sheets
(in thousands, except for share and per share data)

	As of March 31, 2019	As of March 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 15,432	$ 11,659
Available-for-sale securities	—	8,985
Prepaid expenses and other current assets	1,944	793
Total current assets	17,376	21,437
Property and equipment, net	500	567
Restricted cash	184	84
Other non-current assets	—	8
Total assets	$ 18,060	$ 22,096
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK & STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 1,393	$ 900
Accrued expenses	909	1,205
Deferred rent	82	80
Other current liabilities	1	13
Total current liabilities	2,385	2,198
Warrant liability	240	157
Note payable to lender	9,773	7,543
Deferred rent, net of current portion	—	85
Total long-term liabilities	10,013	7,785
Total liabilities	12,398	9,983
Commitments and contingencies (Note 14)		
Series A redeemable convertible preferred stock, par value of $0.0001 per share; 273,117 shares authorized as of March 31, 2019 and 2018; 155,484 and 272,097 shares issued and outstanding as of March 31, 2019 and 2018, respectively	1,198	1,957
Series B redeemable convertible preferred stock, par value of $0.0001 per share; 1,201,185 shares authorized as of March 31, 2019 and 2018; 893,246 and 1,200,499 shares issued and outstanding as of March 31, 2019 and 2018, respectively	10,721	13,816
Series B-1 redeemable convertible preferred stock, par value of $0.0001 per share; 77,170 shares authorized as of March 31, 2019 and 2018; 57,163 shares issued and outstanding as of March 31, 2019 and 2018	651	622
Series C redeemable convertible preferred stock, par value of $0.0001 per share; 46,759,994 shares authorized as of March 31, 2019 and 2018; 38,562,038 and 46,343,594 shares issued and outstanding as of March 31, 2019 and 2018, respectively	45,390	51,818
Series D redeemable convertible preferred stock, par value of $0.0001 per share; 56,132,528 and 19,668,332 shares authorized as of March 31, 2019 and 2018, respectively; 33,291,328 and 19,668,332 shares issued and outstanding as of March 31, 2019 and 2018, respectively	39,659	23,172
Stockholders' deficit:		
Common Stock, par value of $0.0001 per share; 136,964,196 shares authorized as of March 31, 2019 and 2018, respectively; 11,864,827 and 1,919,499 shares issued and 11,864,827 and 1,885,570 outstanding as of March 31, 2019 and 2018, respectively	1	—
Additional paid-in capital	13,213	3,809
Accumulated other comprehensive loss	—	(4)
Accumulated deficit	(105,171)	(83,077)
Total stockholders' deficit	(91,957)	(79,272)
Total liabilities, redeemable convertible preferred stock and stockholders' deficit	$ 18,060	$ 22,096

See accompanying notes.

Tarveda Therapeutics, Inc.
Statements of Operations and Comprehensive Loss
(in thousands, except for share and per share data)

	Year Ended March 31,	
	2019	2018
Operating expenses:		
Research and development	$ 16,685	$ 14,199
General and administrative	4,847	4,346
Total operating expenses	21,532	18,545
Loss from operations	(21,532)	(18,545)
Other income (expense):		
Interest expense, net	(447)	(501)
Loss on extinguishment of debt	(403)	(277)
Change in fair value of warrant liability	21	12
Other income, net	267	300
Total other expense	(562)	(466)
Loss before income taxes	(22,094)	(19,011)
Net loss	$ (22,094)	$ (19,011)
Accretion of preferred stock	(4,843)	(4,824)
Net loss attributable to common stockholders—basic and diluted	$ (26,937)	$ (23,835)
Weighted average common shares outstanding—basic and diluted	4,105,757	1,610,655
Net loss per share attributable to common stockholders—basic and diluted	$ (6.56)	$ (14.80)
Net loss	$ (22,094)	$ (19,011)
Other comprehensive income (loss):		
Unrealized gain (loss) on investments	4	(4)
Comprehensive loss	$ (22,090)	$ (19,015)

See accompanying notes.

Tarveda Therapeutics Inc.
Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except for share and per share data)

	REDEEMABLE CONVERTIBLE PREFERRED STOCK															
	SERIES A $0.0001 PAR VALUE		SERIES B $0.0001 PAR VALUE		SERIES B-1 $0.0001 PAR VALUE		SERIES C $0.0001 PAR VALUE		SERIES D $0.0001 PAR VALUE		COMMON STOCK $0.0001 PAR VALUE		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	ACCUMULATED DEFICIT	TOTAL STOCKHOLDERS' DEFICIT
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT				
Balance as of March 31, 2017	272,097	$ 1,873	1,200,499	$ 13,186	57,163	$ 592	46,343,594	$ 49,037	19,668,332	$ 21,873	1,573,867	$ —	$ 8,070	$ —	$ (64,066)	$ (55,996)
Vesting of restricted stock	—	—	—	—	—	—	—	—	—	—	33,927	—	—	—	—	—
Exercise of common stock options	—	—	—	—	—	—	—	—	—	—	277,776	—	50	—	—	50
Accretion to redemption value	—	84	—	630	—	30	—	2,781	—	1,299	—	—	(4,824)	—	—	(4,824)
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	—	—	513	—	—	513
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	—	—	—	—	—	—	—	(4)	—	(4)
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	—	—	(19,011)	(19,011)
Balance as of March 31, 2018	272,097	$ 1,957	1,200,499	$ 13,816	57,163	$ 622	46,343,594	$ 51,818	19,668,332	$ 23,172	1,885,570	$ —	$ 3,809	$ (4)	$ (83,077)	$ (79,272)
Vesting of restricted stock	—	—	—	—	—	—	—	—	—	—	33,929	—	—	—	—	—
Exercise of common stock options	—	—	—	—	—	—	—	—	—	—	464,272	—	87	—	—	87
Issuance of Series D redeemable convertible preferred stock, net of issuance costs of $54	—	—	—	—	—	—	—	—	13,622,996	14,946	—	—	—	—	—	—
Accretion of Series D issuance costs	—	—	—	—	—	—	—	—	—	54	—	—	(54)	—	—	(54)
Conversion of Series A redeemable convertible preferred stock to common stock	(116,613)	(600)	—	—	—	—	—	—	—	—	379,001	—	600	—	—	600
Conversion of Series B redeemable convertible preferred stock to common stock	—	—	(307,253)	(2,714)	—	—	—	—	—	—	1,320,499	—	2,714	—	—	2,714
Conversion of Series C redeemable convertible preferred stock to common stock	—	—	—	—	—	—	(7,781,556)	(7,848)	—	—	7,781,556	1	7,847	—	—	7,848
Reversal of accretion for conversion of preferred stock to common stock	—	(235)	—	(970)	—	—	—	(1,242)	—	—	—	—	2,447	—	—	2,447
Accretion to redemption value	—	76	—	589	—	29	—	2,662	—	1,487	—	—	(4,843)	—	—	(4,843)
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	—	—	606	—	—	606
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	4
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	—	—	(22,094)	(22,094)
Balance as of March 31, 2019	155,484	$ 1,198	893,246	$ 10,721	57,163	$ 651	38,562,038	$ 45,390	33,291,328	$ 39,659	11,864,827	$ 1	$ 13,213	$ —	$ (105,171)	$ (91,957)

See accompanying notes.

Tarveda Therapeutics, Inc.
Statements of Cash Flows
(in thousands)

	Year Ended March 31,	
	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (22,094)	$ (19,011)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	330	483
Stock-based compensation expense	606	513
Accretion of discount on marketable securities	(37)	(94)
Accretion of non-cash interest expense	158	180
Change in fair value of warrant liability	(21)	(12)
Gain on disposal of equipment	(59)	(32)
Loss on extinguishment of debt	403	277
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(1,151)	(52)
Other non-current assets	8	23
Accounts payable	493	440
Accrued expenses and other current liabilities	(308)	(587)
Deferred rent	(83)	1
Net cash used in operating activities	(21,755)	(17,871)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(275)	(292)
Sales of property and equipment	71	49
Purchases of available-for-sale securities	(6,474)	(28,894)
Sales/maturities of available-for-sale securities	15,500	20,000
Net cash provided by (used in) investing activities	8,822	(9,137)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from stock option exercises	87	50
Proceeds from issuance of Series D preferred stock, net of issuance costs	14,946	—
Proceeds from issuance of common stock in preferred stock conversion	1	—
Repayment of loan payable to bank	(8,025)	(7,272)
Proceeds from loan payable to bank	9,872	7,458
Payment for early retirement on long-term obligations	(75)	(70)
Net cash provided by financing activities	16,806	166
NET INCREASE (DECREASE) IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	3,873	(26,842)
Cash, cash equivalents and restricted cash at beginning of year	11,743	38,585
Cash, cash equivalents and restricted cash at end of year	$ 15,616	$ 11,743
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid for interest	$ 397	$ 277
Purchases of property and equipment in accounts payable	$ —	$ 29
Warrants issued in connection with debt	$ 104	$ 48
Accretion of preferred stock dividends	$ 4,843	$ 4,824
Conversion of preferred stock to common stock	$ 11,161	$ —
Reversal of accretion for preferred stock converted to common stock	$ 2,449	$ —
Accretion to redemption value (issuance costs)	$ 54	$ —
Tenant improvements paid by landlord	$ —	$ 51

The following table provides a reconciliation of the cash, cash equivalents and restricted cash as of each of the periods shown above:

	Year Ended March 31,	
	2019	2018
Cash and cash equivalents	$ 15,432	$ 11,659
Restricted cash	184	84
Total cash, cash equivalents and restricted cash	$ 15,616	$ 11,743

See accompanying notes.

Tarveda Therapeutics, Inc.
Notes to Financial Statements
March 31, 2019 and 2018

1. Nature of the Business

Tarveda Therapeutics, Inc., ("Tarveda" or the "Company") is a clinical stage biopharmaceutical company developing a new class of potent and selective precision oncology medicines, which it refers to as *Pentarin* miniature drug conjugates, for the treatment of patients with various solid tumor malignancies. Tarveda's *Pentarin* miniature drug conjugates are specifically engineered through chemistry to achieve focused accumulation of the anti-cancer payload in the tumor for extended periods of time while simultaneously limiting exposure to surrounding healthy tissue thereby minimizing toxicity. Tarveda currently has two *Pentarin* miniature drug conjugates in clinical trials. Its first clinical program, PEN-866, is its initial candidate from its Heat Shock Protein 90 ("HSP90") binding miniature drug conjugate platform, which it in-licensed from Madrigal Pharmaceuticals, Inc. Tarveda's second clinical program, PEN-221, is a *Pentarin* miniature drug conjugate currently in clinical evaluation for the treatment of patients with cancerous tumors expressing somatostatin receptor 2 ("SSTR2") on the cell surface such as gastrointestinal neuroendocrine tumors ("GI NET"), small cell lung cancer and other neuroendocrine tumors. Tarveda was originally incorporated under the name Blend Therapeutics, Inc. in January 2011, under the laws of the State of Delaware, and its principal office is in Watertown, Massachusetts. In January 2016, the Company spun off its legacy business and changed its name to Tarveda Therapeutics, Inc. Since incorporation, Tarveda has primarily been involved in research and development activities. Since 2016, these research and development activities have been largely focused on drug candidates PEN-866 and PEN-221, as well as acquiring and developing its HSP90 binding miniature drug conjugate platform.

The Company is subject to risks common to other life science companies in the early development stage including, but not limited to, uncertainty of product development and commercialization, lack of marketing and sales history, development by its competitors of new technological innovations, dependence on key personnel, market acceptance of products, product liability, protection of proprietary technology, ability to raise additional financing, and compliance with the Food and Drug Administration and other government regulations. If the Company does not successfully advance its technologies into and through human clinical trials, form partnerships for its programs, and/or commercialize any of its product candidates or license-out its *Pentarin* platform technology, it may be unable to increase its value, generate product revenue, or achieve profitability.

Proposed Merger with Organovo

On December 13, 2019, Organovo Holdings, Inc., a Delaware corporation ("Organovo"), Opal Merger Sub, Inc., a Delaware corporation and wholly owned subsidiary of Organovo ("Merger Sub") and the Company entered into an Agreement and Plan of Merger and Reorganization, pursuant to which the Merger Sub will merge with and into the Company, with the Company surviving the merger as a wholly owned subsidiary of Organovo (the "Merger Agreement"). Organovo is a publicly held, biotechnology company whose common stock is listed on the Nasdaq Global Market.

Under the terms of the Merger Agreement, all of the Company's outstanding common stock will be exchanged for common stock of Organovo and all outstanding options exercisable for common stock and warrants of the Company will be exchanged for options and warrants exercisable for common stock of Organovo.

The Company's and Organovo's obligations to consummate the merger are subject to certain closing conditions, including, among other things, the (i) approval by the stockholders of Organovo of the issuance of the shares of Organovo common stock pursuant to the Merger Agreement, (ii) approval by the stockholders of the Company to adopt the Merger Agreement, (iii) continued listing of Organovo's common stock on the Nasdaq Global or Capital Market and (iv) effectiveness of the registration statement in connection with the merger. The Merger Agreement contains a termination fee that is equal to $1.0 million (or $2.0 million in certain circumstances) plus the reimbursement of certain transaction expenses incurred in connection with the Merger of up to $0.3 million (or $0.5 million in certain circumstances).

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Going Concern

In accordance with Accounting Standards Update ("ASU") 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern* (Subtopic 205-40), the Company has evaluated whether there are certain conditions and events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that the financial statements are issued.

Since its inception, the Company has funded its operations primarily with proceeds from sales of redeemable convertible preferred stock and borrowings under loan and security agreements. Under the borrowing arrangements, the failure to meet certain covenants, provides the lender the right, but not the obligation, to permanently reduce the commitment in whole or in part or to declare all or any portion of the outstanding balance to become due and payable. The Company has incurred recurring losses since its inception, including net losses of $22.1 million and $19.0 million for the years ended March 31, 2019 and 2018, respectively. In addition, as of March 31, 2019, the Company had an accumulated deficit of $105.2 million. The Company expects to continue to generate operating losses for the foreseeable future. As of December 23, 2019, the issuance date of the annual financial statements for the year ended March 31, 2019, the Company expects that its cash and cash equivalents, will be sufficient to fund its operating expenses, capital expenditure requirements and debt service payments through September, 2020. The future viability of the Company beyond that point is dependent on its ability to raise additional capital to finance its operations.

In addition to pursuing consummation of the Merger with Organovo under the Merger Agreement, and the Company's recent equity financing in December 2019 for 12,382,559 shares of its Series 1 redeemable convertible preferred stock at $1.10108, the Company plans to seek additional funding through equity financings, debt financings or other capital sources, including collaborations with other companies or other strategic transactions. The Company may not be able to obtain future financing on acceptable terms, or at all. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders.

If the Company is unable to obtain funding, the Company will be forced to delay, reduce or eliminate some or all of its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects, or the Company may be unable to continue operations. Although management continues to pursue these plans, there is no assurance that the Company will be successful in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations, if at all.

Based on its recurring losses from operations incurred since inception, expectation of continuing operating losses for the foreseeable future, and need to raise additional capital to finance its future operations, as of December 23, 2019, the issuance date of the annual financial statements for the year ended March 31, 2019, the Company has concluded that there is substantial doubt about its ability to continue as a going concern within one year after the date that the financial statements are issued.

The accompanying financial statements do not include any adjustments that might result from the outcome of this uncertainty. Accordingly, the financial statements have been prepared on a basis that assumes the Company will continue as a going concern and which contemplates the realization of assets and satisfaction of liabilities and commitments in the ordinary course of business.

The accompanying financial statements have been prepared in conformity with U.S. GAAP. Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification ("ASC") and as amended by Accounting Standards Updates of the Financial Accounting Standards Board ("FASB").

Tarveda Therapeutics, Inc.
Notes to Financial Statements (continued)
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2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of the financial statements in conformity with U.S. GAAP requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of operations and comprehensive loss during the reporting periods. Accordingly, actual results could differ from those estimates. Significant estimates and assumptions reflected in these financial statements include, but are not limited to, the recognition of research and development expenses, the valuation of preferred stock, the valuation of warrant liabilities and the valuation of common stock used in the determination of stock-based compensation expense. Estimates are periodically reviewed in light of changes in circumstances, facts and experience. On an ongoing basis, management reviews these estimates and assumptions. Changes in estimates are recorded in the period in which they become known.

Segment Information

The Company's chief operating decision maker manages its operations as a single operating segment for the purposes of assessing performance and making operating decisions. All of the Company's long-lived assets are held in the United States.

Concentrations

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash, cash equivalents and available-for-sale securities. The Company generally maintains balances in various operating accounts at financial institutions that management believes to be of high credit quality, in excess of federally insured limits. The Company has not experienced any losses related to its cash, cash equivalents and available-for-sale securities; accordingly, such funds are not exposed to significant credit risk. The Company does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

As of March 31, 2019 and 2018, the Company had no off-balance sheet risk such as foreign exchange contracts, option contracts, or other hedging arrangements.

The Company is dependent on third-party contract research and manufacturing organizations for the performance of its testing for its clinical studies, and production of the related drug substance and product respectively. The Company believes that its relationships with these organizations are satisfactory, and that alternative suppliers of these services are readily available in the event of the loss of one or more of these suppliers.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at acquisition to be cash equivalents. Cash and cash equivalents include cash held in banks, money market instruments and U.S. Treasury securities. Cash equivalents are stated at fair value.

Restricted Cash

Restricted cash consists of $0.1 million required to be set aside as collateral under the Company's facility lease arrangement as of March 31, 2019 and 2018, which the Company classified as restricted cash in non-current assets on its balance sheet.

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As of March 31, 2019, the Company was also required to maintain a separate cash balance of $0.1 million, to collateralize corporate credit cards with a bank, which was also classified as restricted cash in non-current assets on its balance sheets. This separate cash balance was not required as of March 31, 2018.

Available-for-sale Securities

The Company classifies all of its investments with original maturities of greater than ninety days as available-for-sale securities. The Company's investments are measured and reported at fair value using quoted prices in active markets for similar securities. Unrealized gains and losses on available-for-sale securities, which represent the difference between amortized cost and fair value, are reported in other accumulated comprehensive loss, as a separate component of stockholders' deficit. The cost of securities sold is determined on a specific identification basis, and realized gains and losses are included in other income within the statements of operations and comprehensive loss. If any adjustment to fair value reflects a decline in the value of the investment that the Company considers to be "other than temporary," the Company reduces the investment to fair value through a charge to other expense in the statements of operations and comprehensive loss.

Deferred Financing Costs

The Company capitalizes certain legal and other third-party fees that are directly associated with in-process equity financings as deferred financing costs until such financings are consummated. After consummation of the equity financing, these costs are recorded as a reduction of the related redeemable convertible preferred stock or additional paid-in capital as a result of the offering. There were $0.1 million of deferred financing costs as of March 31, 2019. Deferred financing costs are recorded within prepaid expenses and other current assets. No deferred financing costs were capitalized as of March 31, 2018.

Property and Equipment, net

Property and equipment is recorded at cost and depreciated over the estimated useful lives of the related assets using the straight-line method. Upon disposal of an asset, the related cost and accumulated depreciation are removed from the asset accounts and any resulting gain or loss is included in the statement of operations. Repair and maintenance costs are expensed as incurred, whereas major improvements are capitalized as additions to property and equipment. The estimated useful lives of the Company's respective assets are as follows:

Computers and telecommunications equipment	3 years
Furniture and fixtures	7 years
Laboratory equipment	5 years
Leasehold improvements	Shorter of the useful life of the asset or the life of the lease

The Company periodically evaluates whether events and circumstances have occurred that may warrant revision of the estimated useful life of property and equipment.

Impairment of Long-Lived Assets

The Company accounts for long-lived assets in accordance with ASC 360, *Property, Plant, and Equipment*. ASC 360 requires companies to (i) recognize an impairment loss only if the carrying amount of a long-lived asset is not recoverable based on its undiscounted future cash flows, and (ii) measure an impairment loss as the difference between the carrying amount and the fair value of the asset.

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Long lived assets are tested for recoverability whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Whenever such events occur, the Company compares forecasts of undiscounted cash flows expected to result from the use and eventual disposition of the long lived asset to its carrying value. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of an asset are less than its carrying amount. The impairment loss would be based on the excess of the carrying value of the impaired asset over its fair value, determined based on discounted cash flows. In the years ended March 31, 2019 and 2018, there were no impairment charges relating to the Company's property and equipment as there were no events or circumstances that occurred that affected the recoverability of such assets.

Deferred Rent

Deferred rent consists of rent escalation payment terms, tenant improvement allowances and other incentives received from landlords related to the Company's operating leases. Rent escalation represents the difference between actual operating lease payments due and straight-line rent expense, which is recorded by the Company over the term of the lease. Tenant improvement allowances are recorded as deferred rent and amortized as a reduction of periodic rent expense, over the term of the applicable lease.

Comprehensive Loss

Comprehensive loss includes net loss as well as other changes in stockholders' deficit that result from transactions and economic events other than those with stockholders. There was immaterial other comprehensive income for the year ended March 31, 2019 and immaterial other comprehensive loss for the year ended March 31, 2018. Other comprehensive income (loss) consisted of changes in unrealized gains (losses) from available-for-sale investments.

Fair Value Measurements

Certain assets and liabilities are carried at fair value under U.S. GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

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The Company issued preferred stock warrants in connection with equity issuances and debt agreements. These warrants are liability-classified and re-measured at fair value on each reporting date. The fair value of the warrants, classified within the Level 3 designation, is determined using the Black-Scholes option pricing model and is affected by changes in inputs to that model including exercise price, expected stock price volatility, the contractual term, and the risk-free interest rate. The Company will continue to classify the warrants as a liability measured at fair value until the warrants are exercised, expire or are amended in a way that would no longer require liability classification.

The financial assets valued based on Level 2 inputs, consisted of U.S. government treasury bonds. The Company estimated the fair values of these marketable securities by taking into consideration valuations obtained from third-party pricing sources. These pricing sources utilized industry standard valuation models, including both income and market-based approaches, for which all significant inputs were observable, either directly or indirectly, to estimate fair value. These inputs included market pricing based on real-time trade data for the same or similar securities, issuer credit spreads, benchmark yields and other observable inputs. The Company validated the prices provided by its third-party pricing sources by understanding the models used, and analyzing pricing data in certain instances.

Additional financial instruments of the Company consist of restricted cash, accounts payable and accrued expenses. The carrying amounts of these financial instruments approximate their respective fair values due to the nature of the accounts, notably their short maturities.

Research and Development

The Company expenses all costs incurred in performing research and development activities. Research and development expenses include salaries and other related costs including benefits and stock-based compensation, materials and supplies, preclinical expenses, manufacturing expenses, contract services and other outside expenses. As part of the process of preparing the financial statements, the Company is required to estimate their accrued research and development expenses. The Company makes estimates of the accrued expenses as of each balance sheet date in the financial statements based on facts and circumstances known at that time. In addition, there may be instances in which payments made to the Company's vendors will exceed the level of services provided and result in a prepayment of the expense in which case such amounts are reflected as prepaid expenses and other current assets. In accruing service fees, the Company estimates the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, the Company adjusts the accrual or the amount of prepaid expenses accordingly.

Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized in prepaid expenses and other current assets. The capitalized amounts are expensed as the related goods are delivered or the services are performed.

Patent Costs

The Company expenses patent and patent-related costs as incurred and records such costs within general and administrative expenses.

Income Taxes

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases.

Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more-likely-than-not that some portion or the entire deferred tax asset will not be realized.

Stock-Based Compensation

For employee, director and non-employee awards, the Company recognizes compensation expense over the requisite service period, which is generally the vesting period of the respective award. The Company issues stock-based awards with only service-based vesting conditions and records the expense for these awards using the straight-line method. The Company determines the fair value of restricted stock awards using the fair value of its common stock less any applicable purchase price.

Prior to the adoption of ASU 2016-09, (*Topic 718) Compensation—Stock Compensation*, ("ASU 2016-09") on April 1, 2018, as discussed under "Recently Adopted Accounting Pronouncements," the Company recognized compensation expense for only the portion of awards that were expected to vest by estimating a forfeiture rate that was applied. In developing a forfeiture rate estimate, the Company considered its historical experience to estimate pre-vesting forfeitures for service-based awards. The impact of a forfeiture rate adjustment would be recognized in full in the period of adjustment, and if the actual forfeiture rate was materially different from the Company's estimate. Post adoption of ASU 2016-09, the Company accounts for forfeitures as they occur.

Prior to the adoption of ASU No. 2018-07, "*(Topic 718) Compensation—Stock Compensation, Improvements to Non-employee Share-Based Payment Accounting*," ("ASU 2018-07") on April 1, 2018, as discussed under "Recently Adopted Accounting Pronouncements," the measurement date for non-employee awards was the date of commencement of services, resulting in adjustments to stock-based compensation for changes in the fair value of the awards at each financial reporting period. After the adoption of ASU 2018-07, the measurement date for non-employee awards is the later of the adoption date of ASU 2018-07 or the date of grant, and the awards are no longer re-measured at each reporting period. The adoption did not have a material impact on the Company's financial statements.

The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The Company historically has been a private company and lacks company-specific historical and implied volatility information for its stock. Therefore, the Company estimates its expected stock price volatility based on the historical volatility of publicly traded peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. The expected term of the Company's stock options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. Using the simplified method, the expected term of the stock options granted to employees, directors and non-employees is based on the mid-point between the vesting commencement date and the contractual end date. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends on common stock and does not expect to pay any cash dividends in the foreseeable future.

The Company classifies stock-based compensation expense in its statements of operations and comprehensive loss in the same manner in which the award recipient's payroll costs are classified or in which the award recipient's service payments are classified.

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Net Loss Per Share

The Company follows the two-class method when computing net loss per share as the Company has issued shares that meet the definition of participating securities. The two-class method determines net loss per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires income available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

Basic net loss per share attributable to common stockholders is computed by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding for the period. Diluted net loss attributable to common stockholders is computed by adjusting net loss attributable to common stockholders to reallocate undistributed earnings based on the potential impact of dilutive securities. Diluted net loss per share attributable to common stockholders is computed by dividing the diluted net loss attributable to common stockholders by the weighted average number of common shares outstanding for the period, including potential dilutive common shares. For purpose of this calculation, outstanding stock options, redeemable convertible preferred stock and warrants to purchase shares of redeemable convertible preferred stock are considered potential dilutive common shares.

The Company's redeemable convertible preferred stock contractually entitles the holders of such shares to participate in dividends but does not contractually require the holders of such shares to participate in losses of the Company. Accordingly, in periods in which the Company reports a net loss attributable to common stockholders, such losses are not allocated to such participating securities. In periods in which the Company reports a net loss attributable to common stockholders, diluted net loss per share attributable to common stockholders is the same as basic net loss per share attributable to common stockholders, because dilutive common shares are not assumed to have been issued if their effect is anti-dilutive. The Company reported a net loss attributable to common stockholders for the years ended March 31, 2019 and 2018.

Redeemable Convertible Preferred Stock

The Company has presented its preferred stock as temporary equity because the holders of the preferred stock have the right to redeem their shares in certain installments commencing on January 15, 2021. The Company's preferred stock is measured at its redemption value as if the redemption were to occur as of each balance sheet date.

Subsequent Events

The Company evaluates events occurring after the date of its accompanying balance sheets for potential recognition or disclosure in the financial statements. The Company did not identify any material subsequent events requiring adjustment to the accompanying financial statements (recognized subsequent events). Those items requiring disclosure (unrecognized subsequent events) in the financial statements have been disclosed accordingly. Refer to Note 17 for further details.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies. Unless otherwise stated, the Company believes that the impact of the recently issued accounting pronouncements that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

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Recently Adopted Accounting Pronouncements

In March 2016, the FASB issued ASU 2016-09, which requires an entity to recognize excess tax benefits and deficiencies as income tax expense or benefit, the cash flows of which should be included as operating activity in the statement of cash flows. An entity is allowed to either continue accruing compensation cost based on expected forfeitures or to begin recognizing expense as forfeitures occur. In addition, an entity may withhold the maximum statutory tax, which increases the allowable cash settlement portion of awards. The cash paid by an employer when directly withholding shares for tax purposes should be included in the financing activity section of the statement of cash flows. The Company adopted ASU 2016-09 on April 1, 2018, and began recognizing forfeitures as they occur. This did not have a material impact on its financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"), to address diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. The Company adopted ASU 2016-15 on April 1, 2017, which had no impact on its financial statements.

In November 2016, FASB issued ASU 2016-18, *Statements of Cash Flows (Topic 230): Restricted Cash* ("ASU 2016-18"). ASU 2016-18 requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of period total amounts shown on the statement of cash flows. The Company adopted ASU 2016-18 on April 1, 2017, which did not have a material impact on its financial statements.

In January 2017, the FASB issued ASU 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business* ("ASU 2017-01"), to clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions or disposals of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill and consolidation. For public entities, the standard is effective for annual periods beginning after December 15, 2017, including interim periods within those fiscal years. For all other entities, the standard is effective for annual periods beginning after December 15, 2018, including interim periods within annual periods beginning after December 15, 2019. The Company adopted ASU 2017-01 on April 1, 2018, which had no impact on its financial statements.

In June 2018, the FASB issued ASU 2018-07, *Compensation—Stock Compensation (Topic 718): Improvements to Non-employee Share-Based Payment Accounting* ("ASU 2018-07"), which aligns the measurement and classification guidance for share-based payments to non-employees with that for employees, with certain exceptions. It expands the scope of ASC 718 to include share-based payments granted to non-employees in exchange for goods or services used or consumed in the entity's own operations and supersedes the guidance in ASC 505-50. The ASU retains the existing cost attribution guidance, which requires entities to recognize compensation cost for non-employee awards in the same period and in the same manner (i.e., capitalize or expense) they would if they paid cash for the goods or services, but it moves the guidance to ASC 718. The guidance also allows nonpublic entities to account for non-employee awards using certain practical expedients that are already available for employee awards, but the same accounting policies must be used for awards to both employees and non-employees. ASU 2018-07 is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. The Company adopted ASU 2018-07 as of April 1, 2018. The adoption of ASU 2018-07 did not have a material impact on the Company's financial statements.

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In November 2018, a release from the U.S. Securities and Exchange Commission (the "SEC"), entitled, SEC Final Rule Release No. 33-10532, Disclosure Update and Simplification, became effective. The included amendments are intended to simplify and update the SEC's disclosure requirements and eliminate duplicative disclosures between the SEC rules and U.S. GAAP. The amendments included new interim financial statement disclosures to reconcile the beginning balance to the ending balance in redeemable convertible preferred stock and stockholders' deficit for each period for which an income statement is required. Accordingly, the reconciliation of the beginning balance to the ending balance in redeemable convertible preferred stock and stockholders' deficit for all income statement periods have been included in the statements of redeemable convertible preferred stock and stockholders' deficit.

Recently Issued Accounting Pronouncements Not Yet Adopted

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, which requires an entity to recognize lease assets and lease liabilities on the balance sheet for leases with terms of more than 12 months and to disclose key information about leasing arrangements. This new guidance is effective for the Company on April 1, 2019, with early adoption permitted in any interim or annual period. The Company has evaluated the impact that this guidance will have on its financial statements and related disclosures and expects to record a lease liability and corresponding right-of-use asset for $2.7 million in connection with the adoption of this ASU.

3. Fair Value Measurements

The following tables present information about the Company's assets and liabilities that are measured at fair value on a recurring basis (in thousands):

Description	Note Reference	March 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Observable Inputs (Level 3)
Assets:					
Cash and cash equivalents	Note 2	$ 15,432	$ 15,432	$ —	$ —
Liabilities:					
Warrant Liability	Note 9	$ 240	$ —	$ —	$ 240

Description	Note Reference	March 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Observable Inputs (Level 3)
Assets:					
Cash and cash equivalents	Note 2	$ 11,659	$ 11,659	$ —	$ —
Available for sale securities	Note 4	8,985	—	8,985	—
		$ 20,644	$ 11,659	$ 8,985	$ —
Liabilities:					
Warrant Liability	Note 9	$ 157	$ —	$ —	$ 157

Management believes that the carrying amount of its notes payable approximates fair value based on the terms of the notes.

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During the years ended March 31, 2019 and 2018, there were no transfers between fair value measure levels.

As of March 31, 2019, the Company's cash equivalents consisted of money market funds, classified as Level 1 financial assets, as these assets are valued using quoted market prices in active markets without any valuation adjustment. There were no financial assets valued based on Level 2 inputs.

As of March 31, 2018, the Company's cash equivalents consisted of money market funds, classified as Level 1 financial assets, as these assets are valued using quoted market prices in active markets without any valuation adjustment. The financial assets valued based on Level 2 inputs, consisted of U.S. government treasury bonds. The Company estimated the fair values of these marketable securities by taking into consideration valuations obtained from third-party pricing sources. These pricing sources utilized industry standard valuation models, including both income and market-based approaches, for which all significant inputs were observable, either directly or indirectly, to estimate fair value. These inputs included market pricing based on real-time trade data for the same or similar securities, issuer credit spreads, benchmark yields and other observable inputs.

During the years ended March 31, 2019 and 2018, the Company had Level 3 financial liabilities that were measured at fair value on a recurring basis. The Company's Warrant Liability (defined below) is carried at fair value, determined according to Level 3 inputs in the fair value hierarchy as described below.

Warrant Liability

The Company issued warrants for its redeemable convertible preferred stock at various dates since 2012 in connection with equity financing and certain previous and existing borrowing arrangements (see Note 9). The warrant liability represents a freestanding financial instrument that requires the Company to transfer equity instruments upon exercise by the warrant holder at a strike price equal to the issuance price of the underlying preferred stock, are liability classified and re-measured at each reporting and settlement date ("Warrant Liability"). The Warrant Liability was initially recorded at fair value, with changes in fair value for each reporting period recognized in other income (expense) in the statements of operations. A change in the assumptions related to the valuation of the Warrant Liability could have a significant impact on the value of the obligation.

The fair value of the Warrant Liability was determined using the fair value of the preferred stock to be issued pursuant to the instrument with assumptions for the expected number of shares to be issued using the Black-Scholes method. These are significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. The fair value of the Company's preferred stock was the most significant. Changes in the fair value of the Warrant Liability were based on changes in the fair value of the Company's preferred stock at each settlement and reporting date. The preferred stock values used in the calculation to determine the fair value of the Warrant Liability as of March 31, 2019 and 2018 are outlined in the table below:

	As of March 31,	
	2019	2018
Series A Preferred Stock	$ 2.59	$ 2.23
Series B Preferred Stock	$ 4.03	$ 3.46
Series B-1 Preferred Stock	$ 2.69	$ 2.21
Series C Preferred Stock	$ 1.10	$ 1.06
Series D Preferred Stock	$ 1.12	$ 1.10

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The Company estimated the fair value of warrants using the Black-Scholes option pricing model as of March 31, 2019 based on the following inputs:

	Series A	Series B	Series B-1	Series C	Series D
Expected volatility	43.70%	47.09%	40.92%	47.04% - 47.95%	50.93% - 51.16%
Expected dividends	—	—	—	—	—
Remaining contractual term (years)	2.86	4.64	2.17	3.79 - 4.67	8.17 - 10.00
Risk-free interest rate	2.21%	2.21%	2.25%	2.21%	2.34% - 2.40%
Exercise price	$ 5.15	$ 8.75	$ 8.75	$ 1.00	$ 1.10
Weighted average fair value of Preferred Stock	$ 2.59	$ 4.03	$ 2.69	$ 1.10	$ 1.12

The Company estimated the weighted-average fair value of warrants using the Black-Scholes option pricing model as of March 31, 2018 based on the following inputs:

	Series A	Series B	Series B-1	Series C	Series D
Expected volatility	47.90%	50.04%	48.59%	50.00% - 52.78%	52.83%
Expected dividends	—	—	—	—	—
Remaining contractual term (years)	3.86	5.64	3.16	4.79 - 5.67	9.17
Risk-free interest rate	2.45%	2.58%	2.39%	2.53% - 2.58%	2.70%
Exercise price	$ 5.15	$ 8.75	$ 8.75	$ 1.00	$ 1.10
Weighted average fair value of Preferred Stock	$ 2.23	$ 3.46	$ 2.21	$ 1.06	$ 1.10

The following table sets forth a summary of changes in the fair value of the Company's Warrant Liability for which fair value is determined by Level 3 inputs (in thousands):

Balance at March 31, 2017	$120
Issuance of warrants	49
Change in fair value of warrants	(12)
Balance at March 31, 2018	157
Issuance of warrants	104
Change in fair value of warrants	(21)
Balance at March 31, 2019	$240

4. Available-for-sale Securities

As of March 31, 2019, the Company did not hold any available-for-sale securities. As of March 31, 2018, the fair value of available-for-sale securities consisted of U.S. government treasury bonds in the amount of $9.0 million with gross unrealized losses of approximately $4,000, for a carrying value of $9.0 million.

The Company purchases available-for-sale securities at either par or a discount or premium for which the Company amortizes or accretes the related discount or premium into interest income over the maturity of the instrument.

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5. Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of (in thousands):

	As of March 31, 2019	As of March 31, 2018
Prepaid clinical trial expenses	$ 600	$ 531
Prepaid drug manufacturing expenses	869	—
Prepaid rent	87	75
Prepaid other	250	114
Other current assets	138	73
Total	$ 1,944	$ 793

6. Property and Equipment

Property and equipment consisted of (in thousands):

	As of March 31, 2019	As of March 31, 2018
Computers and telecommunications equipment	$ 196	$ 168
Furniture and fixtures	79	78
Laboratory equipment	2,523	2,541
Leasehold improvements	296	293
Total	3,094	3,080
Less: Accumulated depreciation	(2,594)	(2,513)
Property and equipment, net	$ 500	$ 567

Depreciation expense for the years ended March 31, 2019 and 2018, was $0.3 million and $0.5 million, respectively.

7. Accrued Expenses

Accrued expenses consisted of (in thousands):

	As of March 31, 2019	As of March 31, 2018
Accrued clinical trial expenses	$ 186	$ 406
Accrued compensation and benefits	390	278
Accrued R&D expenses	191	354
Accrued professional services	142	99
Accrued other	—	68
Total	$ 909	$ 1,205

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8. Borrowing Arrangements

Loan and Security Agreement with SVB

In June 2017, the Company entered into a $7.5 million loan and security agreement with Silicon Valley Bank ("SVB"), referred to as the SVB Loan. Under the terms of the SVB Loan, the Company was required to make 30 monthly installments of principal and interest, commencing on October 1, 2018. In February 2018, SVB agreed to extend the commencement date of the principal payments to April 1, 2019, acknowledging the fact that the Company achieved the appropriate milestone, resulting in a new final maturity date of September 1, 2021.

The Company used the proceeds from the SVB Loan of $7.5 million to repay $7.0 million under a previous loan arrangement (the "Original Oxford Loan") with Oxford Finance LLC ("Oxford"). Principal payments under the Original Oxford Loan were scheduled to commence in January 2018 and borrowings under the Original Oxford Loan accrued interest at 8.0% annually. The Original Oxford Loan also called for a termination fee equal to 3.2% of the borrowings under the agreement. In connection with the repayment of the Original Oxford Loan, the Company recorded a loss on extinguishment of $0.3 million.

In connection with the SVB Loan, the Company issued warrants to SVB to purchase 68,114 shares of Series D redeemable convertible preferred stock at an exercise price of $1.10108 per share. The Company determined the initial fair value of the warrants to be approximately $48,000, which was recorded as a discount to the borrowings as non-cash interest expense using the effective interest method over the period the SVB Loan was available for borrowing. The Company used the residual method to allocate the proceeds to the Warrant Liability and the loan payable. The warrants were immediately exercisable and expire in 2027.

Interest accrued at a floating per annum rate equal to the greater of (i) zero percent (0.0%) or (ii) the Prime Rate, which is the lowest rate of interest used federally and is based on the overnight rate that banks use to lend to one another, minus one-quarter of one percent (0.25%). The SVB Loan provided for a final payment, payable upon maturity or the repayment in full of all obligations under agreement, equal to 7.0% of the total amount borrowed, or $0.5 million. The final payment was being accreted to interest expense in the statements of operations and comprehensive loss to increase the carrying value of the debt over the term of the loan using the effective interest method.

The SVB Loan included certain operating and financial covenants, including a material adverse change clause, which could have resulted in an event of default if there had been a material adverse change in the business, operations, or condition of the Company or a material impairment of the prospect of repayment of any portion of the loan. At its option, the Company was entitled to prepay all, but not less than all, of the outstanding borrowings, subject to a prepayment premium ranging from 0.5% to 2.0% of the principal amount outstanding as of the date of repayment. In March 2019, the Company used the proceeds from the 2019 Oxford Loan (defined below) to repay all $8.1 million of outstanding borrowings on the SVB Loan, which included the $7.5 million of principal and $0.6 million related to prepayment fees, exit fees, and accrued interest. As of March 31, 2019, the SVB Loan was no longer outstanding.

There were no principal payments due or paid under the SVB Loan during the years ended March 31, 2019 or 2018.

Loan and Security Agreement with Oxford

On March 29, 2019, the Company entered into a $10.0 million loan and security agreement with Oxford Finance LLC ("2019 Oxford Loan"). The Company used proceeds from the 2019 Oxford Loan to repay all

outstanding borrowings to SVB on the SVB Loan, which included the full balance of the SVB Loan plus accrued interest and an exit and prepayment fee as described above. In connection with the repayment of the SVB Loan, the Company recorded a loss on extinguishment of $0.4 million.

Under the terms of the 2019 Oxford Loan, the Company is required to make 36 installments of principal and interest commencing on April 1, 2021. The Company is required to make interest-only payments from April 1, 2019 through April 1, 2021. Interest accrues at a floating per annum rate equal to the greater of (i) eight percent (8.0%) and (ii) the sum of the 30-day U.S. LIBOR rate and the interest rate floor of five and a half percent (5.5%). The Company is currently using an interest rate of 8.0%.

The 2019 Oxford Loan is secured by substantially all of Tarveda's assets, including its intellectual property. The credit facility includes affirmative and negative covenants applicable to Tarveda. The affirmative covenants include, among other things, covenants requiring Tarveda to maintain its legal existence and governmental approvals, deliver certain financial reports, maintain insurance coverage and satisfy certain requirements regarding deposit accounts. Further, subject to certain exceptions, the credit facility contains customary negative covenants limiting Tarveda's ability to, among other things, transfer or sell certain assets, allow changes in business, ownership or business locations, consummate mergers or acquisitions, incur additional indebtedness, create liens, pay dividends or make other distributions and make investments.

Upon the occurrence and during the continuance of an event of default, Oxford may declare all outstanding principal and accrued and unpaid interest under the 2019 Oxford Loan immediately due and payable and exercise the other rights and remedies provided for under the related loan and security documents. The events of default under the credit facility include, among other things, payment defaults, breaches of covenants or representations and warranties, material adverse changes, certain bankruptcy events, cross defaults with certain other indebtedness and judgment defaults.

At its option, the Company is entitled to prepay all, but not less than all, of the outstanding borrowings, subject to a prepayment premium ranging from 1.0% to 3.0% of the principal amount outstanding as of the date of repayment. The Company is also subject to a final payment fee of 5.0%.

The Company has the right to borrow an additional $5.0 million, and not less than $5.0 million and extend the maturity date of the loan upon the achievement of certain milestones. Upon the borrowing of the additional $5.0 million, if at all, the lender is entitled to receive warrants to purchase an additional 68,114 shares of Series D redeemable convertible preferred stock at an exercise price of $1.10108 per share.

In connection with the 2019 Oxford Loan, the Company issued the lender warrants to purchase 136,230 shares of the Company's Series D redeemable convertible preferred stock at an exercise price of $1.10108 per share (see Note 9). The Company determined the initial fair value of the warrants to be $0.1 million and was recorded as a discount to the borrowings as non-cash interest expense using the effective interest method over the period the 2019 Oxford Loan was available for borrowing. The Company used the residual method to allocate the proceeds to the Warrant Liability and the loan payable. The warrants were immediately exercisable and expire in 2029.

There were no principal payments due or paid under the 2019 Oxford Loan during the year ended March 31, 2019.

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As of March 31, 2019, annual principal payments due under this loan will be as follows (in thousands):

Years Ended March 31:	
2021	$ —
2022	2,000
2023	4,000
2024	4,500
	$ 10,500

Long-term debt consisted of the following (in thousands):

	As of March 31,	
	2019	2018
Principal amount of long-term debt	$10,000	$7,500
Accrual of final exit fee	—	114
Debt discount	(227)	(71)
Long-term debt, including accretion	$ 9,773	$7,543

Together with the amortization of the facility fees and legal costs of $0.2 million associated with both the SVB Loan and the 2019 Oxford Loan defined above, and the accretion of the final payment of $0.1 million, total non-cash interest expense recognized during the years ended March 31, 2019 and 2018 was $0.2 million and $0.2 million, respectively. These costs were recorded as debt issuance costs within prepaid expenses and other current assets as of March 31, 2019 and 2018 and were fully recognized as non-cash interest expense using the effective interest method over the term that the SVB Loan was available to be drawn, which ended on March 29, 2019, when the debt was refinanced with the 2019 Oxford Loan described below. The debt discount related to the warrants is reflected as a reduction of the carrying value of the long-term debt on the Company's balance sheet and is being accreted to interest expense over the term of the loan using the effective interest method.

The Company is in compliance with all debt covenants to date.

9. Warrants

The following warrants were outstanding as of March 31, 2019, and were issued in connection with the Company's equity and debt financing arrangements:

Issuance Date**	Exercise Price	Series A	Series B	Series B-1	Series C	Series D
February 2012	$ 5.15	1,020	—	—	—	—
November 2013	$ 8.75	—	685	—	—	—
May 2014	$ 8.75	—	—	20,006	—	—
January 2016	$ 1.00	—	—	—	98,767	—
December 2016	$ 1.00	—	—	—	107,482	—
June 2017	$ 1.10	—	—	—	—	68,114
March 2019	$ 1.10	—	—	—	—	136,230
		1,020	685	20,006	206,249	204,344

** The warrants expire periodically between 2021 and 2029.

Warrants for preferred stock issued to lenders were initially measured at the date of issuance and recorded as a discount to the debt and are being amortized over the term of the related debt.

Warrants for preferred stock issued to equity holders were initially measured at the date of issuance and recorded as a discount to the preferred stock. Additionally, all of the preferred stock warrants are liability classified and make up the Warrant Liability, which is re-measured at each balance sheet date with changes in fair value recorded in the statements of operations and comprehensive income as "change in fair value of warrant liability."

10. Redeemable Convertible Preferred Stock and Stockholders' Deficit

Preferred Stock

The Company has issued Series A redeemable convertible preferred stock ("Series A Preferred Stock"), Series B redeemable convertible preferred stock ("Series B Preferred Stock"), Series B-1 redeemable convertible preferred stock ("Series B-1 Preferred Stock"), Series C redeemable convertible preferred stock ("Series C Preferred Stock"), and Series D redeemable convertible preferred stock ("Series D Preferred Stock"). The Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series C Preferred Stock, Series D Preferred Stock are referred to collectively as the Preferred Stock.

On August 22, 2011, the Company issued 272,097 shares of Series A Preferred Stock at $10.29 per share, for gross proceeds of $2.8 million.

On December 14, 2012, the Company issued 914,682 shares of Series B Preferred Stock at $17.49 per share for gross proceeds of $16.0 million, which included 57,230 shares of Series B Preferred Stock from the conversion of convertible loan payable and accrued interest.

On November 27, 2013, the Company issued 85,745 shares of Series B Preferred Stock at $17.49 per share for gross proceeds of $1.5 million.

On December 23, 2013, the Company issued 200,072 shares of Series B Preferred Stock at $17.49 per share for gross proceeds of $3.5 million.

On February 28, 2014, the Company issued 57,163 shares of Series B-1 Preferred Stock at $17.49 per share for gross proceeds of $1.0 million.

On January 15, 2016, the Company issued 25,519,178 shares of Series C Preferred Stock at $1.00 per share in exchange for gross proceeds of $25.5 million, including the conversion of $10.5 million of convertible notes payable to investors, including accrued interest. These shares were also issued with the obligation to purchase an additional 12,480,822 shares in exchange for gross proceeds of $12.5 million upon the achievement of certain milestones. The Company issued these additional shares of Series C Preferred Stock and received the related proceeds on December 1, 2016 when the milestones were achieved.

In connection with the issuance of the Series C Preferred Stock on January 15, 2016 and December 1, 2016, the Company issued warrants to purchase 5,840,580 and 2,915,663 shares of Series C Preferred Stock, respectively, each at an exercise price of $1.00 per share. Of these warrants issued, warrants to purchase 8,343,594 shares of Series C Preferred Stock were exercised on January 31, 2017 in exchange for proceeds in the amount of $8.3 million.

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On January 31, 2017, the Company issued 19,668,332 shares of Series D Preferred Stock at a price of $1.10108 per share in exchange for gross proceeds of $21.7 million.

On January 16, 2019, one of the Company's investors elected to convert all of its Preferred Stock shares into common stock shares. This conversion consisted of 116,613 shares of Series A Preferred Stock; 307,253 shares of Series B Preferred Stock and 7,781,556 shares of Series C Preferred Stock, which converted into a total of 9,481,056 shares of common stock.

On January 18, 2019, the Company issued 13,622,996 shares of Series D Preferred Stock at a price of $1.10108 per share in exchange for gross proceeds of $15.0 million.

As of March 31, 2019 and 2018, Preferred Stock consisted of the following (in thousands, except share data):

	March 31, 2019				
	Preferred Stock Authorized	Preferred Stock Issued and Outstanding	Carrying Value	Liquidation Value	Common stock Issuable Upon Conversion
Series A Preferred Stock	273,117	155,484	$ 1,198	$ 1,198	505,335
Series B Preferred Stock	1,201,185	893,246	10,721	10,721	3,838,956
Series B-1 Preferred Stock	77,170	57,163	651	651	245,673
Series C Preferred Stock	46,759,994	38,562,038	45,390	45,390	38,562,038
Series D Preferred Stock	56,132,528	33,291,328	39,659	39,659	33,291,328
	104,443,994	72,959,259	$ 97,619	$ 97,619	76,443,330

	March 31, 2018				
	Preferred Stock Authorized	Preferred Stock Issued and Outstanding	Carrying Value	Liquidation Value	Common stock Issuable Upon Conversion
Series A Preferred Stock	273,117	272,097	$ 1,957	$ 1,957	884,336
Series B Preferred Stock	1,201,185	1,200,499	13,816	13,816	5,159,455
Series B-1 Preferred Stock	77,170	57,163	622	622	245,673
Series C Preferred Stock	46,759,994	46,343,594	51,818	51,818	46,343,594
Series D Preferred Stock	19,668,332	19,668,332	23,172	23,172	19,668,332
	67,979,798	67,541,685	$ 91,385	$ 91,385	72,301,390

The following is a description of the rights of the holders of Preferred Stock:

Liquidation Rights

In connection with the January 2017 issuance of Series D Preferred Stock, the Series D Preferred Stock and Series C Preferred Stock became senior to the Series A Preferred Stock and Series B Preferred Stock in the event of a liquidation. Accordingly, as the Series A Preferred Stock and Series B Preferred Stock have a junior preference, the price used for the original issuance price in calculating the liquidation values for both the Series A Preferred Stock and Series B Preferred Stock has been adjusted to reflect this change in liquidation preference. The Series A Preferred Stock uses an original issuance price of $5.15 for liquidation rights and the Series B Preferred Stock uses an original issuance price of $8.75.

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In the event of any voluntary or involuntary liquidation, dissolution, or winding up of the Company, holders of the Series D Preferred Stock then outstanding together with holders of Series C Preferred Stock are entitled to be paid out of the assets of the Company available for distribution to its stockholders before any payment is made to the holders of Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock or common stock by reason of their ownership thereof, at an amount per share equal to the greater of (i) Series C Preferred Stock original issue price ($1.00) and Series D Preferred Stock original issue price ($1.10108), as applicable, plus any Series C Preferred Stock and Series D Preferred Stock accruing dividends, including those accrued but unpaid thereon, whether or not declared and (ii) an amount per share if the Series C Preferred Stock and Series D Preferred Stock had been converted prior to the liquidation event. The conversion price for Series C Preferred Stock and Series D Preferred Stock is equal to the original issuance prices noted above.

Next, the holders of the Series A Preferred Stock then outstanding together with holders of Series B Preferred Stock are entitled to be paid out of the assets of the Company available for distribution to its stockholders before any payment is made to the holders of Series B-1 Preferred Stock or common stock by reason of their ownership thereof, an amount per share equal to the greater of (i) Series A Preferred Stock original issue price ($5.15) and Series B Preferred Stock original issue price ($8.75) as applicable, plus any Series A Preferred Stock and Series B Preferred Stock accruing dividends, as applicable, accrued but unpaid thereon, whether or not declared, together with any other dividends declared but unpaid thereon and (ii) an amount per share if the Series A Preferred Stock and Series B Preferred Stock had been converted prior to the liquidation event.

Next, the holders of the Series B-1 Preferred Stock then outstanding are entitled to be paid out of the assets of the Company available for distribution to its stockholders before any payment is made to the holders of common stock by reason of their ownership thereof, an amount per share equal to Series B-1 Preferred Stock accruing dividends, accrued but unpaid thereon, whether or not declared.

Next, the holders of the Series B-1 Preferred Stock then outstanding together with holders of common stock are entitled to be paid out of the remaining assets of the Company available for distribution to its stockholders.

Conversion

Each share of Preferred Stock is convertible at the option of the holder, at any time after the date of issuance and without the payment of any additional consideration, into that number of fully paid and non-assessable shares of common stock as is determined by dividing the original issue price of the Preferred Stock by the conversion price in effect at the time of conversion. As of March 31, 2019, the Series A Preferred Stock conversion price was $1.5831 per share, the Series B Preferred Stock and Series B-1 Preferred Stock conversion price was $2.0352 per share, the Series C Preferred Stock conversion price of $1.00 per share and the Series D Preferred Stock conversion price was $1.10108 per share. All outstanding shares of Preferred Stock are automatically convertible based upon either: (i) the written consent of holders of at least 60% of the holders of the outstanding Preferred Stock, excluding holders of Series B-1 Preferred Stock, voting as a single class and the board of directors, including a majority of the representatives of the directors that are Preferred Stock holders on the board of directors or (ii) the closing of a firm commitment, underwritten initial public offering, in which the aggregate proceeds to the Company are at least $30.0 million, and having an offering price to the public of at least $3.30 per share.

Redemption

Upon the demand of the holders of at least 60% of the then outstanding shares of the Preferred Stock, the Company shall, on January 15, 2021, and on each of the first, second, and third anniversaries of this date, redeem

from each such holder, shares of the Preferred Stock at the redemption price (described below), the following respective portions of the number of shares of Preferred Stock held by such holder on the applicable redemption date:

January 15, 2021	25.0%
January 15, 2022	33.3%
January 15, 2023	50.0%
January 15, 2024	100.0%

The redemption price for holders of Series D Preferred Stock is equal to the Series D Preferred Stock original issue price of $1.10108 per share, plus unpaid annual non-compounding accruing dividends at $0.07 per share. The redemption price for holders of Series C Preferred Stock is equal to the Series C Preferred Stock original issue price of $1.00 per share, plus unpaid annual non-compounding accruing dividends at $0.06 per share. The redemption price for Series B and B-1 Preferred Stock is $8.75 per share plus unpaid annual non-compounding accruing dividends at $0.52 per share. The redemption price for Series A Preferred Stock is equal to the original issue price of $5.15, plus unpaid annual non-compounding accruing dividends at $0.31 per share.

Voting Rights

The holders of Preferred Stock are entitled to vote, together with the holders of common stock, on all matters submitted to stockholders for a vote. Each preferred stockholder is entitled to the number of votes equal to the number of shares of common stock into which each share of Preferred Stock is convertible at the time of such vote. Certain corporate actions require the approval of 60% of the holders of the Preferred Stock, as described above. At all times during which shares of Preferred Stock remain outstanding, the holders of the outstanding shares of Preferred Stock shall have the exclusive right, separately from the common stock, to elect four directors of the Company.

Dividend Rights

Holders of Preferred Stock are entitled to receive cumulative dividends at an annual rate of $0.07 per share for Series D Preferred Stock, $0.06 per share for Series C Preferred Stock, $0.31 per share for Series A Preferred Stock and $0.52 per share for Series B Preferred Stock and Series B-1 Preferred Stock, which accrue annually in arrears, whether or not such dividends are declared by the board of directors or paid.

The Preferred Stock dividends shall be payable out of any funds legally available and prior and in preference to dividends to any other holder of capital stock of the Company. The holders of Preferred Stock are also entitled to receive a dividend equal to any dividend paid on common stock, other than the dividends composed solely of shares of common stock. Any declared and unpaid dividend shall be payable on liquidation.

Common Stock

Each share of common stock is entitled to one vote; there is no cumulative voting. The holders of shares of common stock are entitled to receive dividends, if and when declared by the board of directors. The voting, dividend, and liquidation rights of the holders of common stock are subject to, and qualified by, the rights, powers, and preferences of the holders of Preferred Stock as is set forth in the Company's certificate of incorporation.

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As of March 31, 2019, the Company has reserved shares of common stock for the conversion or exercise of the following securities:

	As of March 31, 2019
Series A Preferred Stock	505,335
Series B Preferred Stock	3,838,956
Series B-1 Preferred Stock	245,673
Series C Preferred Stock	38,562,038
Series D Preferred Stock	33,291,328
Warrants to purchase Preferred Stock	366,603
Options to purchase common stock	16,519,746
	93,329,679

11. Stock-Based Compensation

2011 Stock Incentive Plan

The Company adopted the 2011 Stock Incentive Plan (the "2011 Plan") on August 19, 2011. The 2011 Plan, as amended in January 2019, permits the grant of share options and shares to its employees for up to 18,323,508 shares of common stock. All option awards are granted with an exercise price equal to or greater than the market price of the Company's common stock at the date of grant. Option and share awards generally vest over four years. Certain option and share awards provide for accelerated vesting if there is a change in control as defined in the 2011 Plan. Option share awards generally vest over four years and have a ten year expiration period.

Stock Option Valuation

The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model using the inputs and assumptions noted in the following table:

	Year Ended March 31,	
	2019	2018
Expected volatility	48.50% - 52.57%	50.53% - 54.23%
Expected dividends	—	—
Expected term (years)	6.02 - 6.07	5.71 - 9.00
Risk-free rate	2.53% - 2.97%	1.86 - 3.10%
Fair value per share of common stock	$ 0.34 - 0.39	$ 0.31 - 0.39

The Company adopted ASU 2018-07 as of April 1, 2018; accordingly the assumptions used during the year ended March 31, 2019 were applied to both employee and non-employee awards. During the year ended March 31, 2018 the Company had not yet adopted ASU 2018-07 and included non-employee inputs and assumptions in the ranges above.

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Stock Options

A summary of option activity under the 2011 Plan is presented below:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of April 1, 2017	12,603,791	$ 0.24	9.29	$ 1,106
Granted	1,415,227	0.34		
Exercised	(277,776)	0.18		40
Cancelled, expired or forfeited	(1,277,898)	0.24		
Outstanding as of March 31, 2018	12,463,344	$ 0.25	8.46	$ 1,307
Granted	4,376,915	0.37		
Exercised	(464,272)	0.19		77
Cancelled, expired or forfeited	(838,914)	0.25		
Outstanding as of March 31, 2019	15,537,073	$ 0.29	8.09	$ 1,491
Options vested and exercisable as of March 31, 2018	5,173,835	$ 0.23	8.14	$ 677
Options vested and exercisable as of March 31, 2019	7,315,360	$ 0.24	7.33	$ 1,068

The aggregate intrinsic value of options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the common stock as of the end of the period.

The weighted-average grant date fair value of options granted during the years ended March 31, 2019 and 2018 was $0.37 per share and $0.34 per share, respectively. The total intrinsic value of options exercised during the years ended March 31, 2019 and 2018 was $0.1 million and approximately $40,000, respectively.

As of March 31, 2019, there were options to purchase 949,089 shares of common stock available for grant under the 2011 Plan.

Restricted Common Stock

On March 2, 2015, the Company issued 135,710 shares of restricted common stock to the Chief Executive Officer of the Company in exchange for a note receivable of $0.3 million, which accrued interest at 1.14% and was scheduled to mature on March 2, 2019. The restrictions on the shares of common stock lapsed at a rate of 25% after the first year and then at a rate of 2.1% monthly through March 2, 2019. Accordingly, all 135,710 shares of restricted common stock were vested as of March 31, 2019 and there were 101,781 and 33,929 shares of restricted common stock vested and unvested, respectively, as of March 31, 2018. The fair value of this award was $1.96 per share.

The note receivable was issued with recourse, however, given the uncertainty as to the Company's intention to proceed with recourse to the executive in the event the note was not repaid at maturity, the Company has accounted for this note as a non-recourse loan. The Company forgave the loan in 2016, however, the executive is required to continue to vest in the award in order to own the shares. The Company recorded stock-based compensation expense of approximately $32,000 in the year ended March 31, 2019 and approximately $35,000 for the year ended March 31, 2018, associated with this award. There was no unrecognized compensation expense as of March 31, 2019.

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On April 11, 2016, the Company issued 500,000 fully vested shares of restricted common stock to the Chief Executive Officer of the Company in exchange for a note receivable in the amount of $0.1 million, which accrues interest at 1.45% and matures on April 11, 2026, unless certain events occur prior to that date. The note receivable was issued with recourse, however, given the uncertainty as to the Company's intention to proceed with recourse to the executive in the event the note is not repaid at maturity, the Company has accounted for this note as a non-recourse loan. Because the note receivable is deemed non-recourse for accounting purposes, the Company has not recorded the note receivable in the accompanying financial statements. The Company forgave this loan in November 2019.

Stock-Based Compensation

Stock-based compensation expense recognized during the years ended March 31, 2019 and 2018 was as follows (in thousands):

	2019	2018
Research and development	$218	$175
General and administrative	388	338
	$606	$513

Total unrecognized compensation expense related to the unvested stock-based awards amounted to $1.4 million as of March 31, 2019, and is expected to be recognized over a weighted-average period of 2.55 years.

12. Income Taxes

For the years ended March 31, 2019 and 2018, the Company did not record a current or deferred income tax expense or benefit due to current and historical losses incurred by the Company. The Company's losses before income taxes consist solely of losses from domestic operations.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act ("TCJA") that significantly reforms the Internal Revenue Code of 1986, as amended (the "Code"). The TCJA, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, effective as of January 1, 2018; limitation of the tax deduction for interest expense; limitation of the deduction for net operating losses to 80% of annual taxable income and elimination of net operating loss carrybacks, in each case, for losses arising in taxable years beginning after December 31, 2017 (though any such tax losses may be carried forward indefinitely); and modifying or repealing many business deductions and credits, including reducing the business tax credit for certain clinical testing expenses incurred in the testing of certain drugs for rare diseases or conditions generally referred to as "orphan drugs". The effect of TCJA is reflected in the provision for income taxes for the years ended March 31, 2019 and 2018.

Tarveda Therapeutics, Inc.
Notes to Financial Statements (continued)
March 31, 2019 and 2018

A reconciliation of the Company's effective tax rate to the statutory federal income tax rate is as follows:

	Year Ended March 31,	
	2019	2018
Federal statutory rate	21.00%	30.75%
Permanent Differences	(0.80)	(1.05)
State taxes, net of federal benefits	7.06	5.88
Impact of Tax Law Change	—	(42.75)
Federal R&D Credits	3.49	3.10
Change in valuation allowance	(30.75)	4.07
Total	0.00%	0.00%

The reported amount of the provision for income taxes for the year ended March 31, 2019, differs from the amount that would result from applying domestic federal statutory rates to pre-tax losses primarily because of changes in the U.S. valuation allowance and the generation of federal and state research and development credits. The components of the Company's deferred taxes are as follows (in thousands):

	Year Ended March 31,	
	2019	2018
Deferred tax assets		
Net operating loss carryforwards	$ 25,511	$ 19,765
Research and development credits	3,968	2,980
Depreciation	—	7
Accruals and Other	367	279
Total deferred tax assets	29,846	23,031
Valuation allowance	(29,825)	(23,031)
Net deferred tax assets	$ 21	$ —
Deferred tax liabilities		
Depreciation	(21)	—
Deferred tax liabilities	$ (21)	$ —
Net deferred tax asset (liability)	$ —	$ —

As of March 31, 2019 and 2018, the Company had U.S. federal net operating loss ("NOLs") carryforwards of $93.5 million and $72.4 million, respectively, which may be available to offset future income tax liabilities, of which $54.1 million begin to expire in 2031. As of March 31, 2019, $39.4 million of these NOLs can be carried forward indefinitely, and as of March 31, 2018, $18.3 million of these NOLs can be carried forward indefinitely.

As of March 31, 2019 and 2018, the Company also had U.S. state net operating loss carryforwards of $93.1 million and $72.1 million, respectively, which may be available to offset future income tax liabilities, which begin to expire in 2031.

As of March 31, 2019 and 2018, the Company had federal research and development tax credit carryforwards of $3.0 million and $2.2 million, respectively, available to reduce future tax liabilities which expire at various dates between 2028 through 2038. As of March 31, 2019, and 2018, the Company had $1.2 million and $0.9 million of state research and development tax credit carryforwards, respectively, available to reduce future tax liabilities, which expire at various dates between 2028 through 2038.

Tarveda Therapeutics, Inc.
Notes to Financial Statements (continued)
March 31, 2019 and 2018

Net operating loss and tax credit carry-forwards are subject to review and possible adjustment by the Internal Revenue Service (the "IRS") and may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant stockholders over a three-year period in excess of 50% as defined under Sections 382 and 383 in the Code, which could limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities. The amount of the annual limitation is determined based on the Company's value immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years. The Company has not, as yet, conducted a study to determine if any such changes have occurred that could limit its ability to use the net operating loss and tax credit carryforwards.

The Company has recorded a valuation allowance against its deferred tax assets in each of the years ended March 31, 2019 and 2018, because the Company's management believes that it is more likely than not that these assets will not be realized. The valuation allowance increased by approximately $6.8 million in 2019, primarily as a result of the generating of net operating losses.

The Company had no unrecognized tax benefits or related interest and penalties accrued for the years ended March 31, 2019 or 2018. The Company will recognize interest and penalties related to uncertain tax positions in income tax expense.

The Company is subject to U.S. federal income tax and Massachusetts state income tax. The statute of limitations for assessment by the IRS and state tax authorities is open for the tax years since 2015; currently, no federal or state income tax returns are under examination by the respective taxing authorities. To the extent the Company has tax attributes carryforwards, the tax years in which the attribute was generated may still be adjusted upon examination by the IRS and the state tax authorities to the extent utilized in a future period.

13. Net Loss Per Share

The following table sets forth the computation of the Company's basic and diluted net loss per share for the years ended March 31, 2019 and 2018 (in thousands, except share and per share amounts):

	Year Ended March 31,	
	2019	2018
Numerator:		
Net loss	$ (22,094)	$ (19,011)
Accretion of preferred stock	(4,843)	(4,824)
Net loss attributable to common stockholders—basic and diluted	$ (26,937)	$ (23,835)
Denominator:		
Weighted-average number of common shares used in net loss per share—basic and diluted	4,105,757	1,610,655
Net loss per share—basic and diluted	$ (6.56)	$ (14.80)

As of March 31, 2019 and 2018, the Company's potentially dilutive securities included preferred stock, unvested restricted stock and stock options and warrants, which have been excluded from the computation of diluted net loss per share attributable to common stockholders as the effect would be anti-dilutive. All the Company's restricted stock was vested as of March 31, 2019. Based on the amounts outstanding as of March 31, 2019 and 2018, the Company excluded the following potential common shares from the computation of diluted

net loss per share attributable to common stockholders because including them would have had an anti-dilutive effect:

	Year Ended March 31,	
	2019	2018
Series A Preferred Stock	155,484	272,097
Series B Preferred Stock	893,246	1,200,499
Series B-1 Preferred Stock	57,163	57,163
Series C Preferred Stock	38,562,038	46,343,594
Series D Preferred Stock	33,291,328	19,668,332
Series A warrants	1,020	1,020
Series B warrants	685	685
Series B-1 warrants	20,006	20,006
Series C warrants	206,249	206,249
Series D warrants	204,344	68,114
Options to purchase common stock	15,537,073	12,463,344
Unvested restricted common stock	—	33,929

14. Commitments and Contingencies

Operating Leases

The Company has an operating lease agreement for its office and laboratory space at 134 Coolidge Ave, Watertown Massachusetts 02472, which consists of approximately 16,459 rentable square feet. The lease, as amended in April 2016 extended through January 31, 2020 and provided for annual rental increases of 2.75% as well as the funding of certain tenant improvements by the landlord. In May 2019, the Company signed an amendment to the lease further extending the term for an additional three years through January 31, 2023, with an option to extend another three years to January 31, 2026, with average monthly rent increasing to $0.1 million.

The lease also requires the Company to pay certain operating costs. The Company was entitled to certain tenant incentives for the build-out of certain leasehold improvements, of which none were utilized in 2019 and $0.1 million were utilized in 2018. As of March 31, 2019, the Company was not entitled to any further tenant improvement allowance under this lease agreement.

Rental expense is recorded as an operating expense within both research and development and general and administrative expenses. Rental expense for the years ended March 31, 2019 and 2018 was $0.7 million and $0.6 million, respectively, and includes the accounting for rent escalations, which have been recorded on a straight-line basis to expense over the term of the lease.

The Company has placed $0.1 million of cash in a restricted cash account under the terms of the arrangement. As of March 31, 2019, minimum rental commitments under non-cancelable operating leases aggregated $0.7 million for the Company. Amounts payable over the next five years are as follows:

	Payments Due By Period				
	Total	Less than 1 Year	1 to 3 Years	4 to 5 Years	More than 5 Years
Debt obligations	$10,500	$ —	$ 2,000	$ 8,500	$ —
Operating lease commitments	565	565	—	—	—
Total	$11,065	$ 565	$ 2,000	$ 8,500	$ —

Tarveda Therapeutics, Inc.
Notes to Financial Statements (continued)
March 31, 2019 and 2018

Licensing Agreements

On September 14, 2016, the Company entered into a license agreement for the discovery, development and commercialization of certain drug product candidates from Madrigal Pharmaceuticals, Inc. The Company made an upfront payment of $0.2 million, which the Company included in research and development expense in 2016 because the amount was due and payable in exchange for the right to use the licensed technology on the date of the agreement.

The Company is also required to make certain milestone payments which could aggregate up to $249.4 million when and if achieved. In addition, the Company is required to pay the third party certain variable royalties not to exceed a single digit percentage annually on any commercial sales involving all products commercialized under the agreement. The Company accrues for the milestone payments only once they are deemed probable of achievement. The Company has achieved certain milestones as of March 31, 2019, including two milestones totaling $0.4 million related to FDA acceptance and Phase 1 clinical trials, both of which were met and paid in the year ended March 31, 2018. These costs are recorded as research and development expense in the statement of operations and comprehensive loss.

15. Related Party Transactions

In 2016, the Company spun-off its legacy business into a new company, Placon Therapeutics, Inc. (“Placon”), which leverages the Company’s original intellectual property for future development. Tarveda provides certain administrative and consulting services to Placon under a master services agreement. The Company recorded approximately $3,500 and $26,000 in the years ended March 31, 2019 and 2018, respectively, as other income. There were no amounts due from Placon as of March 31, 2019 and approximately $4,000 due from Placon as of March 31, 2018.

Please refer to Note 11 for a summary of restricted common stock issued in exchange for notes receivable from the Chief Executive Officer of the Company. These notes receivable were forgiven by the Company in fiscal year 2016 and November 2019.

16. Retirement Plan

The Company has a tax-qualified employee savings and retirement 401(k) plan, covering all qualified employees. Participants may elect a salary deferral up to the statutorily prescribed annual limit for tax-deferred contributions and the Company may make contributions up to 3.0% of the participant’s compensation, subject to certain statutory limits. The Company made contributions of $0.2 million and $0.1 million for the years ended March 31, 2019 and 2018, respectively.

17. Subsequent Events

The Company has evaluated subsequent events through December 23, 2019, the date of issuance of the financial statements, and no subsequent events have occurred through the date the Company issued its financial statements that require disclosure in or adjustments to its financial statements other than the following:

On October 25, 2019, one of the Company’s investors elected to convert all of its Preferred Stock shares into common stock shares. This conversion consisted of 97,178 shares of Series A Preferred Stock; 443,018 shares of Series B Preferred Stock; 14,139,170 shares of Series C Preferred Stock and 6,867,959 shares of Series D Preferred Stock, which converted into a total of 23,226,949 shares of common stock.

Tarveda Therapeutics, Inc.
Notes to Financial Statements (continued)
March 31, 2019 and 2018

On December 12, 2019, the Company issued 12,382,559 shares of its Series 1 Preferred Stock, $0.0001 par value per share (the "Series 1 Preferred") at a price of $1.10108 per share in consideration for gross proceeds of approximately $13.6 million (the "Series 1 Financing"). The Series 1 Preferred has the same rights, preferences, privileges and obligations as the Company's previously existing Series D Preferred Stock except that each share of Series 1 Preferred is initially convertible into 50 shares of the Company's common stock, $0.0001 par value per share (the "Common Stock). In conjunction with the Series 1 Financing, each outstanding share of Common Stock and Preferred Stock (other than the Series 1 Preferred) held by each stockholder of the Company that was an accredited investor and purchased at least it's full Pro Rata Portion of the shares of Series 1 Preferred issued and sold in the Series 1 Financing, was exchanged into one share of the Company's Series CS Preferred Stock $0.0001 par value per share ("Series CS Preferred"). The Series CS Preferred has the same rights, preferences, privileges and obligations as the Company's outstanding Common Stock except each share of Series CS Preferred is initially convertible into 50 shares of Common Stock.

On December 14, 2019, all outstanding shares of the Company's Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series C Preferred Stock and Series D Preferred Stock (collectively, the "Existing Preferred Stock") were automatically converted into shares of Common Stock at the conversion rate then in effect for each such series (the "Existing Preferred Automatic Conversion"). The Warrants to Purchase shares of the Company's Series D Preferred Stock held by Oxford Finance LLC (the "Oxford Series D Warrants") were amended and restated such that they are exercisable for the same number of shares of Series 1 Preferred as the number of shares of Series D Preferred Stock that they would have been exercisable for prior to the amendment and restatement. In connection with the Existing Preferred Automatic Conversion, all other Warrants exercisable for the Company's Existing Preferred Stock became exercisable for a number of shares of Common Stock as the holder of such warrant would have received had they held the underlying shares of Existing Preferred Stock immediately prior to the Existing Preferred Automatic Conversion.

Tarveda Therapeutics, Inc.
Condensed Balance Sheets
(in thousands, except for share and per share)
(unaudited)

	As of December 31, 2019	As of March 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 15,463	$ 15,432
Prepaid expenses and other current assets	2,600	1,944
Total current assets	18,063	17,376
Operating lease right-of-use assets	2,507	—
Property and equipment, net	380	500
Restricted cash	184	184
Other non-current assets	25	—
Total assets	$ 21,159	$ 18,060
LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK & STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$ 2,098	$ 1,393
Accrued expenses	2,909	909
Deferred rent	—	82
Current portion of operating lease liabilities	751	—
Other current liabilities	19	1
Total current liabilities	5,777	2,385
Warrant liability	166	240
Note payable to lender	9,877	9,773
Operating lease liabilities, net of current portion	1,911	—
Total long-term liabilities	11,954	10,013
Total liabilities	17,731	12,398
Commitments and contingencies (Note 14)		
Series A redeemable convertible preferred stock, par value of $0.0001 per share; 273,117 shares authorized as of December 31, 2019 and March 31, 2019; 0 and 155,484 shares issued and outstanding as of December 31, 2019 and March 31, 2019, respectively;	—	1,198
Series B redeemable convertible preferred stock, par value of $0.0001 per share; 1,201,185 shares authorized as of December 31, 2019 and March 31, 2019; 0 and 893,246 shares issued and outstanding as of December 31, 2019 and March 31, 2019, respectively;	—	10,721
Series B-1 redeemable convertible preferred stock, par value of $0.0001 per share; 77,170 shares authorized as of December 31, 2019 and March 31, 2019; 0 and 57,163 shares issued and outstanding as of December 31, 2019 and March 31, 2019, respectively;	—	651
Series C redeemable convertible preferred stock, par value of $0.0001 per share; 46,759,994 shares authorized as of December 31, 2019 and March 31, 2019; 0 and 38,562,038 shares issued and outstanding as of December 31, 2019 and March 31, 2019, respectively;	—	45,390
Series D redeemable convertible preferred stock, par value of $0.0001 per share; 56,132,528 shares authorized as of December 31, 2019 and March 31, 2019; 0 and 33,291,328 shares issued and outstanding as of December 31, 2019 and March 31, 2019, respectively;	—	39,659
Series 1 redeemable convertible preferred stock, par value of $0.0001 per share; 12,518,789 and 0 shares authorized as of December 31, 2019 and March 31, 2019, respectively; 12,382,559 and 0 shares issued and outstanding as of December 31, 2019 and March 31, 2019, respectively;	13,677	—
Stockholders' deficit:		
Series CS convertible preferred stock, par value of $0.0001 per share; 52,784,899 and 0 shares authorized as of December 31, 2019 and March 31, 2019, respectively; 52,784,901 and 0 shares issued and outstanding as of December 31, 2019 and March 31, 2019, respectively;	5	—
Common Stock, par value of $0.0001 per share; 136,964,196 shares authorized as of December 31, 2019 and March 31, 2019; 36,113,769 and 11,864,827 shares issued and outstanding as of December 31, 2019 and March 31, 2019, respectively;	4	1
Additional paid-in capital	111,207	13,213
Accumulated deficit	(121,465)	(105,171)
Total stockholders' deficit	(10,249)	(91,957)
Total liabilities, redeemable convertible preferred stock and stockholders' deficit	$ 21,159	$ 18,060

See accompanying notes to unaudited interim financial statements.

Tarveda Therapeutics, Inc.
Condensed Statements of Operations and Comprehensive Loss
(in thousands, except for share and per share data)
(unaudited)

	Nine Months Ended December 31,	
	2019	2018
Operating expenses:		
Research and development	$ 11,124	$ 12,725
General and administrative	4,709	3,679
Total operating expenses	15,833	16,404
Loss from operations	(15,833)	(16,404)
Other income (expense):		
Interest expense, net	(664)	(374)
Change in fair value of warrant liability	16	10
Other income, net	187	249
Total other expense	(461)	(115)
Loss before income taxes	(16,294)	(16,519)
Net loss	$ (16,294)	$ (16,519)
Net loss attributable to common stockholders and Series CS preferred stockholders—basic and diluted	$ (39,830)	$ (17,735)
Net loss attributable to common stockholders—basic and diluted (Note 13)	$ (3,379)	$ (17,735)
Net loss attributable to Series CS preferred stockholders—basic and diluted (Note 13)	$ (36,451)	$ —
Weighted-average common shares outstanding—basic and diluted	17,789,978	2,113,491
Weighted-average Series CS preferred shares outstanding—basic and diluted	3,838,902	—
Net loss per share attributable to common stockholders—basic and diluted	$ (0.19)	$ (8.39)
Net loss per share attributable to Series CS preferred stockholders—basic and diluted	$ (9.50)	$ —
Net loss	$ (16,294)	$ (16,519)
Other comprehensive income (loss):		
Unrealized gain (loss) on investments	—	4
Comprehensive loss	$ (16,294)	$ (16,515)

See accompanying notes to unaudited interim financial statements.

Tarveda Therapeutics Inc.
Condensed Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except for share and per share data)
(unaudited)

	REDEEMABLE CONVERTIBLE PREFERRED STOCK															
	SERIES A $0.0001 PAR VALUE		SERIES B $0.0001 PAR VALUE		SERIES B-1 $0.0001 PAR VALUE		SERIES C $0.0001 PAR VALUE		SERIES D $0.0001 PAR VALUE		COMMON STOCK $0.0001 PAR VALUE		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	ACCUMULATED DEFICIT	TOTAL STOCKHOLDERS' DEFICIT
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT				
Balance as of March 31, 2018	272,097	$ 1,957	1,200,499	$ 13,816	57,163	$ 622	46,343,594	$ 51,818	19,668,332	23,172	1,885,570	$ —	$ 3,809	$ (4)	$ (83,077)	$ (79,272)
Vesting of restricted stock	—	—	—	—	—	—	—	—	—	—	25,445	—	—	—	—	—
Exercise of common stock options	—	—	—	—	—	—	—	—	—	—	394,828	—	74	—	—	74
Accretion to redemption value	—	63	—	472	—	22	—	2,086	—	975	—	—	(3,618)	—	—	(3,618)
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	—	—	441	—	—	441
Unrealized gain (loss) on available-for-sale securities	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	4
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	—	—	(16,519)	(16,519)
Balance as of December 31, 2018	272,097	2,020	1,200,499	14,288	57,163	644	46,343,594	53,904	19,668,332	24,147	2,305,843	$ —	706	$ —	$ (99,596)	$ (98,890)

Tarveda Therapeutics Inc.
Condensed Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit (Continued)
(in thousands, except for share and per share data)
(unaudited)

	REDEEMABLE CONVERTIBLE PREFERRED STOCK												SERIES CS PREFERRED STOCK $0.0001 PAR VALUE		COMMON STOCK $0.0001 PAR VALUE		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)	ACCUMULATED DEFICIT	
	SERIES A $0.0001 PAR VALUE		SERIES B $0.0001 PAR VALUE		SERIES B-1 $0.0001 PAR VALUE		SERIES C $0.0001 PAR VALUE		SERIES D $0.0001 PAR VALUE		SERIES 1 $0.0001 PAR VALUE									
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT				
Balance as of March 31, 2019	155,484	$ 1,198	893,246	$ 10,721	57,163	$ 651	38,562,038	$ 45,390	33,291,328	$ 39,659	—	$ —	—	—	11,864,827	$ 1	$ 13,213	$ —	$ (105,171)	$
Exercise of common stock options	—	—	—	—	—	—	—	—	—	—	—	—	—	—	184,293	—	36	—	—	
Accretion to redemption value	—	24	—	230	—	15	—	1,145	—	1,111	—	224	—	—	—	—	(2,749)	—	—	
Forgiveness of officer loan	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	82	—	—	
Stock-based compensation expense	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	481	—	—	
Isssuance of Series 1 redeemable convertible preferred stock, net of issuance costs and beneficial conversion feature	—	—	—	—	—	—	—	—	—	—	12,382,559	7,198	—	—	—	—	6,255	—	—	
Accretion of beneficial conversion feature	—	—	—	—	—	—	—	—	—	—	—	6,255	—	—	—	—	(6,255)	—	—	
Conversion of redeemable convertible preferred stock to common stock	(97,178)	(744)	(557,412)	(5,790)	(57,163)	(666)	(16,165,766)	(17,475)	(6,867,959)	(8,224)	—	—	—	—	26,397,078	3	32,899	—	—	
Exchange of common stock for Series CS preferred stock	—	—	—	—	—	—	—	—	—	—	—	—	2,332,429	—	(2,332,429)	—		—	—	
Exchange of redeemable convertible preferred stock for Series CS convertible preferred stock	(58,306)	(478)	(335,834)	(5,161)	—	—	(22,396,272)	(29,060)	(26,423,369)	(32,546)	—	—	50,452,470	5		—	67,245	—	—	
Net loss	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	(16,294)	
Balance as of December 31, 2019	—	$ —	—	$ —	—	$ —	—	$ —	—	$ —	12,382,559	$ 13,677	52,784,899	$ 5	36,113,769	$ 4	$ 111,207	$ —	$ (121,465)	$

See accompanying notes to unaudited interim financial statements.

Tarveda Therapeutics, Inc.
Condensed Statements of Cash Flows
(in thousands)
(unaudited)

	Nine Months Ended December 31,	
	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (16,294)	$ (16,519)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	201	260
Stock-based compensation expense	481	441
Accretion of discount on marketable securities	—	(36)
Accretion of non-cash interest expense	108	120
Change in fair value of warrant liability	(16)	(10)
Loss on extinguishment of Series D preferred stock warrants	(58)	—
Other non-cash activity	74	(59)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(656)	(676)
Operating right-of-use asset	484	—
Other non-current assets	(26)	(8)
Accounts payable	705	301
Operating lease liability	(328)	—
Accrued expenses and other current liabilities	2,018	890
Deferred rent	(82)	(140)
Net cash used in operating activities	(13,389)	(15,436)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property and equipment	(69)	(252)
Sales of property and equipment	—	11
Purchases of available-for-sale securities	—	(6,474)
Sales/maturities of available-for-sale securities	—	15,500
Net cash (used in) provided by investing activities	(69)	8,785
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from stock option exercises	36	74
Proceeds from issuance of Series 1, net of issuance costs	13,453	—
Net cash provided by financing activities	13,489	74
NET INCREASE (DECREASE) IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	$ 31	$ (6,577)
Cash, cash equivalents and restricted cash at beginning of year	$ 15,616	$ 11,743
Cash, cash equivalents and restricted cash at end of year	$ 15,647	$ 5,166
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid for interest	$ 542	$ 268
Purchases of property and equipment in accounts payable	$ —	$ 58
Accretion of preferred stock	$ 2,749	$ 3,602
Conversion of Series A-D redeemable convertible preferred stock into common stock	$ 36,032	$ —
Issuance of Series CS in exchange for Series A, B, B-1, C and D preferred stock	$ 64,110	$ —
Modification of existing lease obligation	$ 2,466	$ —
Cash paid in the prior period related to the lease	$ 56	$ —

The following table provides a reconciliation of the cash, cash equivalents and restricted cash as of each of the periods shown above:

	Nine Months Ended December 31,	
	2019	2018
Cash and cash equivalents	$ 15,463	$ 5,083
Restricted cash	184	83
Total cash, cash equivalents and restricted cash	$ 15,647	$ 5,166

See accompanying notes to unaudited interim financial statements.

Tarveda Therapeutics, Inc.
Notes to Unaudited Condensed Interim Financial Statements
December 31, 2019 and 2018

1. Nature of the Business

Tarveda Therapeutics, Inc., ("Tarveda" or the "Company") is a clinical stage biopharmaceutical company developing a new class of potent and selective precision oncology medicines, which it refers to as *Pentarin* miniature drug conjugates, for the treatment of patients with various solid tumor malignancies. Tarveda's *Pentarin* miniature drug conjugates are specifically engineered through chemistry to achieve focused accumulation of the anti-cancer payload in the tumor for extended periods of time while simultaneously limiting exposure to surrounding healthy tissue thereby minimizing toxicity. Tarveda currently has two *Pentarin* miniature drug conjugates in clinical trials. Its first clinical program, PEN-866, is its initial candidate from its Heat Shock Protein 90 ("HSP90"), binding miniature drug conjugate platform, which it in-licensed from Madrigal Pharmaceuticals, Inc. Tarveda's second clinical program, PEN-221, is a *Pentarin* miniature drug conjugate currently in clinical evaluation for the treatment of patients with tumors expressing somatostatin receptor 2 ("SSTR2") on the cell surface such as gastrointestinal neuroendocrine tumors ("GI NET"), small cell lung cancer and other neuroendocrine tumors. Tarveda was originally incorporated under the name Blend Therapeutics, Inc. in January 2011, under the laws of the State of Delaware, and its principal office is in Watertown, Massachusetts. In January 2016, the Company spun off its legacy business and changed its name to Tarveda Therapeutics, Inc. Since incorporation, Tarveda has primarily been involved in research and development activities. Since 2016, these research and development activities have been largely focused on drug candidates PEN-866 and PEN-221, as well as acquiring and developing its HSP90 binding miniature drug conjugate platform.

The Company is subject to risks common to other life science companies in the early development stage including, but not limited to, uncertainty of product development and commercialization, lack of marketing and sales history, development by its competitors of new technological innovations, dependence on key personnel, market acceptance of products, product liability, protection of proprietary technology, ability to raise additional financing, and compliance with the U.S. Food and Drug Administration ("FDA") and other government regulations. If the Company does not successfully advance its technologies into and through human clinical trials, form partnerships for its programs, and/or commercialize any of its product candidates or license-out its *Pentarin* platform technology, it may be unable to increase its value, generate product revenue, or achieve profitability.

Proposed Merger with Organovo

On December 13, 2019, Organovo Holdings, Inc., a Delaware corporation ("Organovo"), Opal Merger Sub, Inc., a Delaware corporation and wholly owned subsidiary of Organovo ("Merger Sub") and the Company entered into an Agreement and Plan of Merger and Reorganization, pursuant to which the Merger Sub will merge with and into the Company, with the Company surviving the merger as a wholly owned subsidiary of Organovo (the "Merger Agreement"). Organovo is a publicly held, biotechnology company whose common stock is listed on the Nasdaq Global Market.

Under the terms of the Merger Agreement, all of the Company's outstanding capital stock will be exchanged for common stock of Organovo and all outstanding options exercisable for common stock and warrants of the Company will be exchanged for options and warrants exercisable for common stock of Organovo.

The Company's and Organovo's obligations to consummate the merger are subject to certain closing conditions, including, among other things, the (i) approval by the stockholders of Organovo of the issuance of the shares of Organovo common stock pursuant to the Merger Agreement, (ii) approval by the stockholders of the Company to adopt the Merger Agreement, (iii) continued listing of Organovo's common stock on the Nasdaq Global or Capital Market and (iv) effectiveness of the registration statement in connection with the merger. The

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Merger Agreement contains a termination fee that is equal to $1.0 million (or $2.0 million in certain circumstances) plus the reimbursement of certain transaction expenses incurred in connection with the Merger of up to $0.3 million (or $0.5 million in certain circumstances).

Going Concern

In accordance with Accounting Standards Update ("ASU") 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern* (Subtopic 205-40), the Company has evaluated whether there are certain conditions and events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that the financial statements are issued.

Since its inception, the Company has funded its operations primarily with proceeds from sales of redeemable convertible preferred stock and borrowings under loan and security agreements. Under the borrowing arrangements, the failure to meet certain covenants, provides the lender the right, but not the obligation, to permanently reduce the commitment in whole or in part or to declare all or any portion of the outstanding balance to become due and payable. The Company has incurred recurring losses since its inception, including net losses of $16.3 million and $16.5 million for the nine months ended December 31, 2019 and 2018, respectively. In addition, as of December 31, 2019, the Company had an accumulated deficit of $121.5 million. The Company expects to continue to generate operating losses for the foreseeable future. As of February 12, 2020, the issuance date of the interim financial statements for the nine months ended December 31, 2019, the Company expects that its cash and cash equivalents, will be sufficient to fund its operating expenses, capital expenditure requirements and debt service payments through September 2020. The future viability of the Company beyond that point is dependent on its ability to raise additional capital to finance its operations.

In addition to pursuing consummation of the Merger with Organovo under the Merger Agreement, and the Company's recent equity financing in December 2019 for 12,382,559 shares of its Series 1 redeemable convertible preferred stock ("Series 1 Preferred Stock") at $1.10108 per share, the Company plans to seek additional funding through equity financings, debt financings or other capital sources, including collaborations with other companies or other strategic transactions. The Company may not be able to obtain future financing on acceptable terms, or at all. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders.

If the Company is unable to obtain funding, the Company will be forced to delay, reduce or eliminate some or all of its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects, or the Company may be unable to continue operations. Although management continues to pursue these plans, there is no assurance that the Company will be successful in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations, if at all.

Based on its recurring losses from operations incurred since inception, expectation of continuing operating losses for the foreseeable future, and need to raise additional capital to finance its future operations, as of February 13, 2020, the issuance date of the interim financial statements for the nine months ended December 31, 2019, the Company has concluded that there is substantial doubt about its ability to continue as a going concern within one year after the date that the financial statements are issued.

The accompanying financial statements do not include any adjustments that might result from the outcome of this uncertainty. Accordingly, the financial statements have been prepared on a basis that assumes the Company will continue as a going concern and which contemplates the realization of assets and satisfaction of liabilities and commitments in the ordinary course of business.

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The accompanying financial statements have been prepared in conformity with U.S. GAAP. Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification ("ASC") and as amended by Accounting Standards Updates of the Financial Accounting Standards Board ("FASB").

2. Summary of Significant Accounting Policies

The Company's significant accounting policies are disclosed in the audited financial statements for the years ended March 31, 2019 and 2018. Since the date of those financial statements, there have been no changes to its significant accounting policies except as noted below.

Unaudited Interim Financial Information

The accompanying condensed balance sheet as of December 31, 2019, and the condensed statements of operations and comprehensive loss, condensed statements of redeemable convertible preferred stock and stockholders' deficit and condensed statements of cash flows for the nine months ended December 31, 2019 and 2018 are unaudited. The unaudited condensed interim financial statements have been prepared on the same basis as the audited annual financial statements, and in the opinion of management reflect all adjustments, which include only normal recurring adjustments necessary for the fair statement of the Company's financial position as of December 31, 2019 and the results of its operations and its cash flows for the nine months ended December 31, 2019 and 2018. The financial data and other information disclosed in these notes related to the nine months ended December 31, 2019 and 2018 are also unaudited. The results for the nine months ended December 31, 2019 are not necessarily indicative of results to be expected for the year ended March 31, 2020, any other interim periods, or any future year or period.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies. Unless otherwise stated, the Company believes that the impact of the recently issued accounting pronouncements that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

Recently Adopted Accounting Pronouncements

In February 2016, the FASB issued Accounting Standard Update ("ASU") *2016-02, Leases* (Topic 842) ("ASC 842"), which requires an entity to recognize lease assets and lease liabilities on the balance sheet for leases with terms of more than 12 months and to disclose key information about leasing arrangements. The Company adopted ASC 842 on April 1, 2019, and elected the optional transition method that allows for a cumulative-effect adjustment in the period of adoption and did not require restatement of prior periods. Refer to Note 5 for more information regarding the Company's adoption of new lease standard.

Recently Issued Accounting Pronouncements Not Yet Adopted

In December 2019, the FASB issued ASU 2019-12, *Income Taxes-Simplifying the Accounting for Income Taxes* ("ASU 2019-12"). ASU 2019-12 eliminates certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. The new guidance also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. The standard is effective for annual periods beginning after December 15, 2020 and

interim periods within, with early adoption permitted. Adoption of the standard requires certain changes to be made prospectively, with some changes to be made retrospectively. This standard will have no material impact on the Company's financial condition and results of operations.

3. Fair Value Measurements

The following tables present information about the Company's assets and liabilities that are measured at fair value on a recurring basis (in thousands):

Description	December 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Observable Inputs (Level 3)
Assets:				
Cash and cash equivalents	$ 15,463	$ 15,463	$ —	$ —
Liabilities:				
Warrant Liability	$ 166	$ —	$ —	$ 166

Description	March 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Observable Inputs (Level 3)
Assets:				
Cash and cash equivalents	$ 15,432	$ 15,432	$ —	$ —
Liabilities:				
Warrant Liability	$ 240	$ —	$ —	$ 240

Management believes that the carrying amount of its loan payable approximates fair value based on the terms of the notes.

During the nine months ended December 31, 2019 and the year ended March 31, 2019, there were no transfers between fair value measure levels.

As of December 31, 2019 and March 31, 2019, the Company's cash equivalents consisted of money market funds, classified as Level 1 financial assets, as these assets are valued using quoted market prices in active markets without any valuation adjustment. There were no financial assets valued based on Level 2 inputs.

As of December 31, 2019 and March 31, 2019, the Company had Level 3 financial liabilities that were measured at fair value on a recurring basis. The Company's Warrant Liability (defined below) is carried at fair value, determined according to Level 3 inputs in the fair value hierarchy as described below.

Warrant Liability

The Company issued warrants for its redeemable convertible preferred stock at various dates since 2012 in connection with equity financing and certain previous and existing borrowing arrangements (see Note 9).

On December 14, 2019, each outstanding warrant to purchase Series D Preferred Stock held by Oxford Finance LLC in connection with the 2019 Oxford Loan, ("Oxford Series D Warrants"), was amended and

restated such that they are exercisable for the same number of shares of Series 1 Preferred Stock as the number of shares of Series D Preferred Stock for which they would have been exercisable prior to the amendment and restatement. These warrants have the same exercise price and term. This amendment was treated as an extinguishment and the difference in fair value of approximately $117,000 of the Series D Preferred Stock warrants and Series 1 Preferred Stock warrants was recorded to other income in the statement of operations.

On December 14, 2019, each outstanding warrant to purchase Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series C Preferred Stock or Series D Preferred Stock, excluding the Oxford Series D Warrants became exercisable for the same number of shares of common stock as the number of shares of the applicable series of preferred stock the holder of such warrant would have received if the warrant had been exercised prior to December 14, 2019. These warrants were remeasured immediately prior to the exchange and then derecognized. The fair value of the Existing Preferred Stock warrants was recorded to other expense in the statements of operations and comprehensive loss upon derecognition. The warrants to purchase common stock are equity-classified and had a de minimis fair value.

The warrant liability represents a freestanding financial instrument that requires the Company to transfer equity instruments upon exercise by the warrant holder at a strike price equal to the issuance price of the underlying preferred stock. The warrants to purchase preferred stock are remeasured at each reporting and settlement date ("Warrant Liability"). The Warrant Liability was initially recorded at fair value, with changes in fair value for each reporting period recognized in other income (expense) in the statements of operations. A change in the assumptions related to the valuation of the Warrant Liability could have a significant impact on the value of the obligation.

The fair value of the Warrant Liability was determined using the fair value of the preferred stock to be issued pursuant to the instrument with assumptions for the expected number of shares to be issued using the Black-Scholes method. These are significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. The fair value of the Company's preferred stock was the most significant input. Changes in the fair value of the Warrant Liability were based on changes in the fair value of the Company's preferred stock at each settlement and reporting date. The preferred stock values used in the calculation to determine the fair value of the Warrant Liability as of December 31, 2019 and March 31, 2019 are outlined in the table below:

	As of December 31, 2019
Series 1 Preferred Stock	$ 1.68

	As of March 31, 2019
Series A Preferred Stock	$ 2.59
Series B Preferred Stock	$ 4.03
Series B-1 Preferred Stock	$ 2.69
Series C Preferred Stock	$ 1.10
Series D Preferred Stock	$ 1.12

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The Company estimated the fair value of warrants using the Black-Scholes option pricing model as of December 31, 2019 based on the following inputs:

	December 31, 2019 Series 1
Expected volatility	54.87%
Expected dividends	—
Remaining contractual term (years)	9.25
Risk-free interest rate	2.38%
Exercise price	$ 1.10

The Company estimated the fair value of warrants using the Black-Scholes option pricing model as of March 31, 2019 based on the following inputs:

	March 31, 2019				
	Series A	Series B	Series B-1	Series C	Series D
Expected volatility	43.70%	47.09%	40.92%	47.04% - 47.95%	50.93% - 51.16%
Expected dividends	—	—	—	—	—
Remaining contractual term (years)	2.86	4.64	2.17	3.79 - 4.67	8.17 - 10.00
Risk-free interest rate	2.21%	2.21%	2.25%	2.21%	2.34% - 2.40%
Exercise price	$ 5.15	$ 8.75	$ 8.75	$ 1.00	$ 1.10
Weighted average fair value of Preferred Stock	$ 2.59	$ 4.03	$ 2.69	$ 1.10	$ 1.12

The following table sets forth a summary of changes in the fair value of the Company's Warrant Liability for which fair value is determined by Level 3 inputs (in thousands):

Balance at March 31, 2019	$ 240
Derecognition of preferred stock warrants	(58)
Change in fair value of warrant liability	(133)
Change in fair value from exchange of Series D warrants for Series 1 warrants	117
Balance at December 31, 2019	$ 166

4. Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of (in thousands):

	As of December 31, 2019	As of March 31, 2019
Prepaid clinical trial expenses	$ 176	$ 600
Prepaid drug manfacturing expense	741	869
Prepaid rent	—	87
Prepaid other	243	250
Deferred financing expenses	1,413	100
Other current assets	27	38
Total	$ 2,600	$ 1,944

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5. Leases

Adoption of ASC 842

As of April 1, 2019, the Company adopted ASC 842, which requires lessees to recognize a right-of-use ("ROU") asset and lease liability for leases with terms of greater than twelve months. ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The Company implemented this new accounting standard using the effective date method for its existing lease, which did not cause any adjustments to prior year financial statements. The Company elected the package of three practical expedients available for existing contracts and has not elected the hindsight methodology in its implementation of ASC 842. The package of practical expedients allowed the Company to carry forward its historical assessments of whether contracts are or contain leases and the classification of its existing operating leases. Variable executory costs, as it relates to net leases, are to be excluded from the calculation of the Company's lease liability.

The Company has one material operating lease, specifically its office building. Upon adoption of ASC 842, the Company recognized its ROU asset and corresponding lease liability based on the present value of remaining lease payments over the lease term. The ROU asset was measured as its lease liability plus prepaid rent less any deferred rent. As interest rates were not implicitly stated in the respective lease agreements, nor were they readily determinable, the Company used its incremental borrowing rate as the discount rate when measuring the lease liability. The Company also classified deferred rent and prepaid rent as an offset to the Company's ROU asset upon adoption. All deferred rent prior to the adoption was short-term.

The impact of the adoption of ASC 842 on the balance sheet as of April 1, 2019 is as follows (in thousands):

	ASC 840 March 31, 2019	Impact of Adoption	ASC 842 April 1, 2019
Deferred rent	$ 15	$ (15)	$ —
Prepaid rent	56	(56)	—
Operating right-of-use assets	—	532	532
Operating lease liability, current	—	491	491

After the initial adoption of ASC 842, on an ongoing basis, the Company evaluates all contracts upon inception and determines whether the contract contains a lease by assessing whether there is an identified asset and whether the contract conveys the right to control the use of identified asset in exchange for consideration over a period of time. If a lease is identified, the Company will apply the guidance from ASC 842 to properly account for the lease.

Operating Lease

The Company has an operating lease agreement for its office and laboratory space at 134 Coolidge Ave, Watertown, Massachusetts 02472, which consists of approximately 16,459 rentable square feet. The lease, as amended in April 19, 2016, extends through January 31, 2020 and provides for annual rental increases of 2.75% as well as the funding of certain tenant improvements by the landlord. The lease also requires the Company to pay certain operating costs.

On May 31, 2019, the Company signed an amendment to the lease extending the term for an additional three years through January 31, 2023, with an option to extend another three years to January 31, 2026, with average monthly rent increasing to approximately $0.1 million. The amendment includes a tenant improvements allowance of $0.2 million.

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The Company was entitled to certain tenant incentives for the build-out of certain leasehold improvements, of which none were utilized in the nine months ended December 31, 2019 and 2018. As of December 31, 2019, the Company was not entitled to any further tenant improvement allowance under this lease agreement. As of December 31, 2019 and March 31, 2019, the Company has classified the $0.1 million as restricted cash on its balance sheet as collateral relating to the lease agreement.

Rental expense for the nine months ended December 31, 2019 and 2018 was $0.6 million and $0.5 million, respectively, and includes the accounting for rent escalations, which have been recorded on a straight-line basis to expense over the term of the lease.

The table below summarizes the Company's lease liability and corresponding ROU asset as of December 31, 2019 (in thousands):

	As of December 31, 2019
Assets	
Operating lease right-of-use assets	$ 2,507
Total lease right-of-use assets	$ 2,507
Liabilities	
Current	
Operating lease liabilities	$ 751
Noncurrent	
Operating lease liabilities, net of current portion	1,911
Total operating lease liabilities	$ 2,662
Weighted average remaining lease term:	2.5 years
Weighted average discount rate:	8.0%

Future lease payments relating to the Company's operating lease liabilities as of December 31, 2019, are as follows (in thousands):

	As of December 31, 2019
Fiscal year ended March 31, 2020	$ 216
Fiscal year ended March 31, 2021	959
Fiscal year ended March 31, 2022	985
Fiscal year ended March 31, 2023	840
Thereafter	—
Total future lease payments	$ 3,000
Less: imputed interest	(338)
Total lease obligations	$ 2,662
Less: current obligations	(751)
Noncurrent lease obligations	$ 1,911

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ASC 840 Disclosures

Future minimum lease payments under non-cancelable leases as of March 31, 2019, were as follows (in thousands):

Fiscal year	As of March 31, 2019
2019	$ 565
2020	—
2021	—
2022	—
Total future minimum lease payments	$ 565

6. Property and Equipment

Property and equipment consisted of (in thousands):

	As of December 31, 2019	As of March 31, 2019
Computers and telecommunications equipment	$ 218	$ 196
Furniture and fixtures	79	79
Laboratory equipment	2,044	2,523
Leasehold improvements	295	296
Total	2,636	3,094
Less: Accumulated depreciation	(2,256)	(2,594)
Property and equipment, net	$ 380	$ 500

Depreciation expense for the nine months ended December 31, 2019 and 2018, was $0.2 million and $0.3 million, respectively.

7. Accrued Expenses

Accrued expenses consisted of (in thousands):

	As of December 31, 2019	As of March 31, 2019
Accrued clinical trial expenses	$ 332	$ 186
Accrued compensation and benefits	1,100	390
Accrued R&D expenses	171	191
Accrued professional services	1,306	142
Total	$ 2,909	$ 909

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8. Borrowing Arrangements

Long-term debt consisted of the following (in thousands):

	As of December 31, 2019	As of March 31, 2019
Principal amount of long-term debt	$ 10,000	$ 10,000
Accrual of final exit fee	76	—
Debt discount	(199)	(227)
Long-term debt, including accretion, net of current portion	$ 9,877	$ 9,773

The Company is in compliance with all debt covenants to date.

The Company recorded $0.7 million and $0.4 million of interest expense during the nine months ended December 31, 2019 and 2018, respectively.

9. Warrants

The following warrants were outstanding as of December 31, 2019 and March 31, 2019:

As of December 31, 2019

Issuance Date**	Exercise Price	Common stock	Series 1
February 2012	$ 1.58	3,315	—
November 2013	$ 2.04	2,943	—
May 2014	$ 2.04	85,979	—
January 2016	$ 1.00	98,767	—
December 2016	$ 1.00	107,482	—
June 2017	$ 1.10	68,114	—
March 2019	$ 1.10		136,230
		366,600	136,230

** These warrants were amended on December 14, 2019 to be exercisable for a different instrument, see detailed amendment information below. The warrants expire periodically between 2021 and 2029.

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As of March 31, 2019:

Issuance Date**	Exercise Price	Series A	Series B	Series B-1	Series C	Series D
February 2012	$ 5.15	1,020	—	—	—	—
November 2013	$ 8.75	—	685	—	—	—
May 2014	$ 8.75	—	—	20,006	—	—
January 2016	$ 1.00	—	—	—	98,767	—
December 2016	$ 1.00	—	—	—	107,482	—
June 2017	$ 1.10	—	—	—	—	68,114
March 2019	$ 1.10	—	—	—	—	136,230
		1,020	685	20,006	206,249	204,344

** The warrants expire periodically between 2021 and 2029.

Warrants for preferred stock issued to lenders were initially measured at fair value at the date of issuance and recorded as a discount to the debt, which is being amortized over the term of the debt.

Warrants for preferred stock issued to equity holders were initially measured at the date of issuance and recorded as a discount to the preferred stock. All of the preferred stock warrants are liability classified and comprise the Warrant Liability, which is remeasured at each balance sheet date with changes in fair value recorded in the statements of operations and comprehensive income as “change in fair value of warrant liability.”

10. Redeemable Convertible Preferred Stock and Stockholders’ Deficit

Preferred Stock

From August 2011 to June 2019, the Company issued preferred stock and warrants to purchase preferred stock under various agreements. Details of these issuances are included in the audited financial statements as of March 31, 2019 and 2018.

On October 25, 2019, one of the Company’s investors elected to convert all of its shares of preferred stock into shares of common stock. This conversion consisted of 97,178 shares of Series A Preferred Stock; 443,018 shares of Series B Preferred Stock; 14,139,170 shares of Series C Preferred Stock and 6,867,959 shares of Series D Preferred Stock, which converted into a total of 23,226,949 shares of common stock. The conversion was accounted for as a conversion pursuant to original terms and the carrying amount of the preferred stock was reclassified to additional paid-in capital on the Company’s balance sheet.

On December 12, 2019, the Company issued 12,382,559 shares of its Series 1 Preferred Stock, $0.0001 par value per share at a price of $1.10108 per share for gross proceeds of approximately $13.6 million (the “Series 1 Financing”). The Series 1 Preferred Stock has the same rights, preferences, privileges and obligations as the Company’s previously existing Series D Preferred Stock except that each share of Series 1 Preferred Stock is convertible into 50 shares of the Company’s common stock, $0.0001 par value per share. The Company paid approximately $77,000 of costs on behalf of its investors and $104,000 in issuance costs, both of which were recorded as a discount to the Series 1 Preferred Stock. Upon issuance, the conversion feature in the Series 1 Preferred Stock represented a beneficial conversion feature because the fair value of the common stock into which the Series 1 Preferred Stock is convertible exceeded the effective conversion price of the Series 1 Preferred Stock. The Company recorded the intrinsic value of the beneficial conversion feature of $6.3 million as a discount to the Series 1 Preferred Stock with a corresponding credit to additional paid-in capital. Because the Series 1 Preferred

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Stock is immediately convertible upon issuance and does not include mandatory redemption provisions, the discount on the Series 1 Preferred Stock was immediately accreted. Such accretion decreases earnings attributable to common stockholders in the calculation of net income (loss) per share for the nine months ended December 31, 2019.

In conjunction with the Series 1 Financing, each outstanding share of common stock and preferred stock (other than the Series 1 Preferred Stock), held by each stockholder of the Company that was an accredited investor and purchased at least its full pro rata portion of the shares of Series 1 Preferred Stock issued and sold in the Series 1 Financing, was exchanged into a number of shares of the Company's Series CS Preferred Stock, $0.0001 par value per share ("Series CS Preferred") equal to the number of shares of common stock issuable upon conversion under original terms immediately prior to the Series 1 Financing. The Series CS Preferred has the same rights, preferences, privileges and obligations as the Company's outstanding common stock except that each share of Series CS Preferred is convertible into 50 shares of common stock. Series CS Preferred is classified as equity and is further described in the Common Stock section below. The exchange of the preferred stock for Series CS Preferred Stock was accounted for as a capital transaction, for which the difference between the carrying value of the preferred stock of $64.1 million, and the fair value of the Series CS Preferred of $80.2 million is recorded as a decrease to equity of $16.1 million, which decreases earnings attributable to common stockholders in the calculation of net income (loss) per share for the nine months ended December 31, 2019. The exchange of common stock for Series CS Preferred did not transfer value between permanent equity holders and preferred stockholders and therefore there was no accounting for such exchange except to record the par value of Series CS Preferred.

On December 14, 2019, all outstanding shares of the Company's Series A Preferred Stock, Series B Preferred Stock, Series B-1 Preferred Stock, Series C Preferred Stock and Series D Preferred Stock (collectively, the "Existing Preferred Stock"), that were not already exchanged for Series CS Preferred, were automatically converted into shares of common stock at the conversion rate then in effect for each such series (the "Existing Preferred Automatic Conversion"). The conversion was accounted for as a conversion pursuant to the original terms of the preferred stock and the carrying amount of the preferred stock was reclassified to additional paid-in capital on the Company's balance sheet.

As of December 31, 2019 and March 31, 2019, preferred stock consisted of the following (in thousands, except share data):

	December 31, 2019				
	Preferred Stock Authorized	Preferred Stock Issued and Outstanding	Carrying Value	Liquidation Value	Common stock Issuable Upon Conversion
Series 1 Preferred Stock	12,518,789	12,382,559	$ 13,677	$ 13,677	619,127,950
	12,518,789	12,382,559	$ 13,677	$ 13,677	619,127,950

	March 31, 2019				
	Preferred Stock Authorized	Preferred Stock Issued and Outstanding	Carrying Value	Liquidation Value	Common stock Issuable Upon Conversion
Series A Preferred Stock	273,117	155,484	$ 1,198	$ 1,198	505,335
Series B Preferred Stock	1,201,185	893,246	10,721	10,721	3,838,956
Series B-1 Preferred Stock	77,170	57,163	651	651	245,673
Series C Preferred Stock	46,759,994	38,562,038	45,390	45,390	38,562,038
Series D Preferred Stock	56,132,528	33,291,328	39,659	39,659	33,291,328
	104,443,994	72,959,259	$ 97,619	$ 97,619	76,443,330

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The following is a description of the rights of the holders of preferred stock:

Liquidation Rights

In the event of any voluntary or involuntary liquidation, dissolution, or winding up of the Company, the holders of Series 1 Preferred Stock are entitled to be paid out of the assets of the Company available for distribution to its stockholders before any payment is made to the holders of Series CS Preferred Stock or common stock by reason of their ownership thereof, at an amount per share equal to the greater of (i) Series 1 Preferred Stock Original Issue Price ($1.10108), as applicable, plus any Series 1 Preferred Stock accruing dividends, including those accrued but unpaid thereon, whether or not declared and (ii) an amount per share if the Series 1 Preferred Stock had been converted prior to the liquidation event.

Next, the holders of the Series CS Preferred Stock then outstanding together with holders of common stock are entitled to be paid out of the remaining assets of the Company available for distribution to its stockholders.

Conversion

Each share of Series 1 Preferred Stock is convertible at the option of the holder, at any time after the date of issuance and without the payment of any additional consideration, into that number of fully paid and non-assessable shares of common stock as is determined by dividing the Original Issue Price of the preferred stock by the conversion price in effect at the time of conversion. The Series 1 Preferred Stock conversion price was $0.02202126 per share and the Series CS Preferred Stock was $0.02 per share. All outstanding shares of preferred stock are automatically convertible based upon either: (i) the written consent of holders of at least 60% of the holders of the outstanding Series 1 Preferred Stock , voting as a single class and the board of directors, including a majority of the representatives of the directors that are Series 1 Preferred Stock holders on the board of directors or (ii) the closing of a firm commitment, underwritten initial public offering, in which the aggregate proceeds to the Company are at least $30.0 million, and having an offering price to the public of at least $0.066 per share.

Redemption

Upon the demand of the holders of at least 60% of the then outstanding shares of the Series 1 Preferred Stock, the Company shall, on January 15, 2023, and on each of the first, second, and third anniversaries of this date, redeem from each such holder of shares of the Series 1 Preferred Stock at the redemption price (described below), the following respective portions of the number of shares of Series 1 Preferred Stock held by such holder on the applicable redemption date:

January 15, 2023	25.0%
January 15, 2024	33.3%
January 15, 2025	50.0%
January 15, 2026	100.0%

The redemption price for holders of Series 1 Preferred Stock is equal to the Series 1 Preferred Stock original issue price of $1.10108 per share, plus unpaid annual non-compounding cumulative dividends at $0.07 per share. The Series CS Preferred Stock has no redemption rights.

Tarveda Therapeutics, Inc.
Notes to Unaudited Condensed Interim Financial Statements (Continued)
December 31, 2019 and 2018

Voting Rights

The holders of Series 1 Preferred Stock and Series CS Preferred Stock are entitled to vote, together with the holders of common stock, on all matters submitted to stockholders for a vote. Each preferred stockholder is entitled to the number of votes equal to the number of shares of common stock into which each share of preferred stock is convertible at the time of such vote. Certain corporate actions require the approval of 60% of the holders of the Series 1 Preferred Stock, as described above. At all times during which shares of Series 1 Preferred Stock remain outstanding, the holders of the outstanding shares of Series 1 Preferred Stock shall have the exclusive right, separately from the common stock, to elect four directors of the Company.

Dividend Rights

Holders of Series 1 Preferred Stock are entitled to receive non-compounding cumulative dividends at an annual rate of $0.07 per share, which accrue annually in arrears, whether or not such dividends are declared by the board of directors or paid. The Series CS Preferred Stock has the same dividend rights as the holders of common stock.

The Series 1 Preferred Stock dividends shall be payable out of any funds legally available and prior and in preference to dividends to any other holder of capital stock of the Company. The holders of Series 1 Preferred Stock are also entitled to receive a dividend equal to any dividend paid on common stock, other than the dividends composed solely of shares of common stock. Any declared and unpaid dividend shall be payable on liquidation.

Common Stock

Each share of common stock and as converted Series CS Preferred Stock is entitled to one vote; there is no cumulative voting. The holders of shares of Series CS Preferred Stock and common stock are entitled to receive dividends, if and when declared by the board of directors. The voting, dividend, and liquidation rights of the holders of Series CS Preferred Stock and common stock are subject to, and qualified by, the rights, powers, and preferences of the holders of preferred stock as is set forth in the Company's certificate of incorporation.

As of December 31, 2019, the Company has reserved shares of common stock for the conversion or exercise of the following securities:

	As of December 31, 2019
Series 1 Preferred Stock	619,127,950
Series CS Preferred Stock	2,639,245,050
Warrants to purchase common stock	366,600
Warrants to purchase preferred stock	6,811,500
Options to purchase common stock	18,323,508
	3,283,874,608

Tarveda Therapeutics, Inc.
Notes to Unaudited Condensed Interim Financial Statements (Continued)
December 31, 2019 and 2018

11. Stock-Based Compensation

2011 Stock Incentive Plan

The Company adopted the 2011 Stock Incentive Plan (the "2011 Plan") on August 19, 2011. The 2011 Plan, as amended in January 2019, permits the grant of share options and shares to its employees for up to 18,323,508 shares of common stock. All option awards are granted with an exercise price equal to or greater than the market price of the Company's common stock at the date of grant. Option and share awards generally vest over four years and have a ten year expiration period. Certain option and share awards provide for accelerated vesting if there is a change in control as defined in the 2011 Plan.

Stock Option Valuation

The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model using the inputs and assumptions noted in the following table:

	Nine Months Ended December 31,	
	2019	2018
Expected volatility	47.25% - 48.62%	49.20% - 52.57%
Expected dividends	—	—
Expected term (years)	6.02 - 6.07	5.80 - 6.08
Risk-free rate	1.69% - 2.32%	2.88% - 2.97%
Fair value per share of common stock	$ 0.37	$ 0.34 - 0.39

Stock Options

A summary of option activity under the 2011 Plan is presented below:

	Number of Options	Average Exercise Price	Contractual Term (in years)	Intrinsic Value
Outstanding as of March 31, 2019	15,537,073	$ 0.29	8.09	$ 1,491
Granted	397,592	0.37		
Exercised	(184,293)	0.19		33
Cancelled, expired or forfeited	(1,190,933)	0.35		54
Outstanding as of December 31, 2019	14,559,439	$ 0.28	7.39	$ —
Options vested and exercisable as of December 31, 2019	9,863,144	$ 0.25	6.84	$ —

The aggregate intrinsic value of options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the common stock as of the end of the period.

The weighted-average grant date fair value of options granted during the nine months ended December 31, 2019 and 2018 was $0.37 per share and $0.38 per share, respectively. The total intrinsic value of options exercised in the nine months ended December 31, 2019 and 2018 was approximately $33,000 and approximately $64,000, respectively.

As of December 31, 2019, there were options to purchase 1,784,327 million shares of common stock available for grant under the 2011 Plan.

Tarveda Therapeutics, Inc.
Notes to Unaudited Condensed Interim Financial Statements (Continued)
December 31, 2019 and 2018

Restricted Common Stock

On April 11, 2016, the Company issued 500,000 fully vested shares of restricted common stock to the Chief Executive Officer of the Company in exchange for a note receivable in the amount of $0.1 million, which accrues interest at 1.45% and matures on April 11, 2026, unless certain events occur prior to that date. The note receivable was issued with recourse, however, given the uncertainty as to the Company's intention to proceed with recourse to the executive in the event the note is not repaid at maturity, the Company has accounted for this note as a non-recourse loan. Because the note receivable is deemed non-recourse for accounting purposes, the Company has not recorded the note receivable in the accompanying financial statements. The Company forgave this loan in November 2019.

Stock-Based Compensation

Stock-based compensation expense recognized during the nine months ended December 31, 2019 and 2018 was as follows (in thousands):

	Nine Months Ended December 31,	
	2019	2018
Research and development	$ 187	$ 149
General and administrative	294	292
	$ 481	$ 441

Total unrecognized compensation expense related to the unvested stock-based awards amounted to $1.0 million as of December 31, 2019, and is expected to be recognized over a weighted-average period of 2.35 years.

12. Income Taxes

The Company's income tax provision is computed based on the federal statutory rate and the average state statutory rates, net of the related federal benefit. For the nine months ended December 31, 2019 and 2018, the Company did not record a current or deferred income tax expense or benefit due to current and historical losses incurred by the Company. The Company's losses before income taxes consist solely of losses from domestic operations.

The Company's estimate of the realizability of the deferred tax asset is dependent on estimates of projected future levels of taxable income. In analyzing future taxable income levels, the Company considered all evidence currently available, both positive and negative.

Tarveda Therapeutics, Inc.
Notes to Unaudited Condensed Interim Financial Statements (Continued)
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13. Net Loss Per Share

The following table sets forth the computation of the Company's basic and diluted net loss per share for the nine months ended December 31, 2019 and 2018 (in thousands, except share and per share amounts):

	Nine Months Ended December 31,		
	2019		2018
	Common	CS Preferred	Common
Numerator:			
Net loss	$ (1,382)	$ (14,912)	$ (16,519)
Deemed dividend on exchange of preferred stock for Series CS Preferred	(1,362)	(14,697)	—
Accretion of beneficial conversion feature and preferred stock	(635)	(6,842)	(1,216)
Net loss attributable to common stockholders - basic and diluted	$ (3,379)	$ (36,451)	$ (17,735)
Denominator:			
Weighted-average number of common shares used in net loss per share - basic and diluted	17,789,978	3,838,902	2,113,491
Net loss per share-basic and diluted	$ (0.19)	$ (9.50)	$ (8.39)

Series CS Preferred Stock was determined to have the characteristics of common stock because it is subordinate to all other stock of the Company and participates in losses with common stockholders. Therefore, presentation of earnings per share is required for both Series CS Preferred and common stock. In order to calculate the net loss attributable to common stockholders, net loss, the deemed dividend and the accretion of preferred stock have been allocated between common stock and Series CS Preferred based on the as-converted number of weighted-average shares of each class outstanding for the nine months ended December 31, 2019. Each share of Series CS Preferred is convertible into 50 shares of common stock. Net loss per share is calculated by dividing the net loss attributable to each class of shares by the weighted-average number of shares outstanding for the nine months ended December 31, 2019.

Tarveda Therapeutics, Inc.
Notes to Unaudited Condensed Interim Financial Statements (Continued)
December 31, 2019 and 2018

As of December 31, 2019 and 2018, the Company's potentially dilutive securities included preferred stock, unvested restricted stock and stock options; and warrants which have been excluded from the computation of diluted net loss per share attributable to common stockholders, as the effect would be anti-dilutive. All the Company's restricted stock was vested as of December 31, 2019. Based on the amounts outstanding as of December 31, 2019 and 2018, the Company excluded the following potential common shares from the computation of diluted net loss per share attributable to common stockholders because including them would have had an anti-dilutive effect:

	Nine Months Ended December 31,	
	2019	2018
Series A Preferred Stock	—	272,097
Series B Preferred Stock	—	1,200,499
Series B-1 Preferred Stock	—	57,163
Series C Preferred Stock	—	46,343,594
Series D Preferred Stock	—	19,668,332
Series 1 Preferred Stock	12,382,559	—
Series A warrants	—	1,020
Series B warrants	—	685
Series B-1 warrants	—	20,006
Series C warrants	—	206,249
Series D warrants	—	136,228
Series 1 warrants	136,230	—
Common stock warrants	366,600	—
Options to purchase common stock	14,559,439	13,302,001
Unvested restricted common stock	—	8,484

14. Commitments and Contingencies

Licensing Agreements

On September 14, 2016, the Company entered into a license agreement for the discovery, development and commercialization of certain drug product candidates from Madrigal Pharmaceuticals, Inc. Under such agreement, Tarveda is required to make certain milestone payments which could aggregate up to $249.4 million when and if achieved. The Company made an upfront payment of $0.2 million, which the Company included in research and development expense in 2016 because the amount was due and payable in exchange for the right to use the licensed technology on the date of the agreement. The Company accrues for the milestone payments only once they are deemed probable of achievement. The Company has achieved certain milestones since the inception of the agreement, including two milestones totaling $0.4 million, related to FDA acceptance and Phase 1 clinical trials, both of which were met and paid in the year ended March 31, 2018. These costs are recorded as research and development expense in the statement of operations and comprehensive loss. As of December 31, 2019, no additional milestones were probable of achievement.

15. Related Party Transactions

In 2016, the Company spun-off its legacy business into a new company, Placon Therapeutics, Inc. ("Placon"), which leverages the Company's original intellectual property for future development. Tarveda provides certain administrative and consulting services to Placon under a master services agreement. The Company recorded no amount and approximately $3,000 during the nine months ended December 31, 2019 and 2018, respectively, as other income. There was nothing due from Placon as of December 31, 2019 and an immaterial amount due from Placon as of March 31, 2019.

Tarveda Therapeutics, Inc.
Notes to Unaudited Condensed Interim Financial Statements (Continued)
December 31, 2019 and 2018

Refer to Note 11 for a summary of restricted common stock issued in exchange for a note receivable from the Chief Executive Officer of the Company. This note receivable was forgiven by the Company in November 2019.

16. Retirement Plan

The Company has a tax-qualified employee savings and retirement 401(k) plan, covering all qualified employees. Participants may elect a salary deferral up to the statutorily prescribed annual limit for tax-deferred contributions and the Company may make contributions up to 3.0% of the participant's compensation, subject to certain statutory limits. The Company made contributions of $0.1 million for the nine months ended December 31, 2019 and 2018.

17. Subsequent Events

The Company has evaluated subsequent events through February 12, 2020, the date of issuance of the financial statements, and no subsequent events have occurred through the date the Company issued its financial statements that require disclosure in or adjustments to its financial statements.

Annex A

AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

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AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

THIS AGREEMENT AND PLAN OF MERGER AND REORGANIZATION (this "***Agreement***") is made and entered into as of December 13, 2019, by and among **ORGANOVO HOLDINGS, INC.**, a Delaware corporation ("***Organovo***"), **OPAL MERGER SUB, INC.**, a Delaware corporation and wholly-owned subsidiary of Organovo ("***Merger Sub***"), and **TARVEDA THERAPEUTICS, INC.,** a Delaware corporation ("***Buyer***"). Certain capitalized terms used in this Agreement are defined in **Exhibit A**.

RECITALS

A. Organovo and Buyer intend to effect a merger of Merger Sub with and into Buyer (the "***Merger***") in accordance with this Agreement and the DGCL. Upon consummation of the Merger, Merger Sub will cease to exist, and Buyer will become a wholly-owned subsidiary of Organovo.

B. The parties intend that the Merger qualify as a "reorganization" within the meaning of Section 368(a) of the Code. By executing this Agreement, the parties hereby adopt this Agreement as a "plan of reorganization" within the meaning of Treasury Regulations Sections 1.368-2(g) and 1.368-3, and intend to file the statement required by Treasury Regulations Section 1.368-3(a).

C. The Board of Directors of Organovo (i) has determined that the Contemplated Transactions, including the Merger, are fair to and in the best interests of Organovo and its stockholders, (ii) has approved this Agreement, the Merger, the issuance of shares of Organovo Common Stock to the stockholders of Buyer pursuant to the terms of this Agreement, the change of control of Organovo, and the other actions contemplated by this Agreement and has deemed this Agreement advisable, (iii) has approved the Reverse Split, and (iv) has determined to recommend that the stockholders of Organovo vote to approve the issuance of shares of Organovo Common Stock to the stockholders of Buyer pursuant to the terms of this Agreement, the change of control of Organovo, the Reverse Split, the New Tarveda Equity Plan, the approval of compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger and such other actions as contemplated by this Agreement.

D. The Board of Directors of Merger Sub (i) has determined that the Contemplated Transactions, including the Merger, are fair to and in the best interests of Merger Sub and its sole stockholder, (ii) has approved this Agreement, the Merger and the other transactions contemplated by this Agreement and has deemed this Agreement advisable; and (iii) has determined to recommend that the sole stockholder of Merger Sub vote to adopt this Agreement and thereby approve the Merger and such other actions as contemplated by this Agreement.

E. The Board of Directors of Buyer (i) has determined that the Contemplated Transactions, including the Merger, are fair to and in the best interests of Buyer and its stockholders, (ii) has approved this Agreement, the Merger and the other transactions contemplated by this Agreement and has deemed this Agreement advisable; and (iii) has determined to recommend that the stockholders of Buyer vote to adopt this Agreement and thereby approve the Merger and such other actions as contemplated by this Agreement.

F. In order to induce Buyer to enter into this Agreement and to cause the Merger to be consummated, the officers and directors of Organovo listed on Schedule A hereto (solely in their capacities as stockholders) are executing support agreements in favor of Buyer concurrently with the execution and delivery of this Agreement in the form substantially attached hereto as **Exhibit B** (the "***Organovo Stockholder Support Agreements***").

G. In order to induce Organovo to enter into this Agreement and to cause the Merger to be consummated, the officers, directors and 5% or greater stockholders (together with their Affiliates) of Buyer listed on Schedule B hereto (solely in their capacities as stockholders) who hold at least eight-five percent (85)% of the outstanding Buyer Capital Stock on an as-converted basis as of the date hereof are executing (i) support agreements in favor of Organovo concurrently with the execution and delivery of this Agreement in the form substantially attached hereto as **Exhibit C** (the "***Buyer Stockholder Support Agreements***") and (ii) lock-up agreements in favor of Organovo concurrently with the execution and delivery of this Agreement in the form substantially attached hereto as **Exhibit D** (the "***Buyer Lock-up Agreements***").

H. It is expected that within ten (10) Business Days after the Form S-4 Registration Statement is declared effective under the Securities Act, the holders of shares of Buyer Capital Stock sufficient to adopt and approve this Agreement and the Merger as required under the DGCL and Buyer's Certificate of Incorporation will execute and deliver an action by written consent in a form reasonably acceptable to Organovo.

I. In order to induce Buyer to enter into this Agreement and to cause the Merger to be consummated, the officers and directors of Organovo set forth on Schedule A hereto are executing lock-up agreements in favor of Buyer concurrently with the execution and delivery of this Agreement in the form substantially attached hereto as **Exhibit D** (the "***Organovo Lock-up Agreements***").

The parties to this Agreement, intending to be legally bound, agree as follows:

ARTICLE 1

DESCRIPTION OF TRANSACTION

1.1 Structure of the Merger. Upon the terms and subject to the conditions set forth in this Agreement, at the Effective Time, Merger Sub shall be merged with and into Buyer, and the separate existence of Merger Sub shall cease. Buyer will continue as the surviving corporation in the Merger (the "***Surviving Corporation***").

1.2 Effects of the Merger. The Merger shall have the effects set forth in this Agreement and in the applicable provisions of the DGCL.

1.3 Closing; Effective Time. Unless this Agreement is earlier terminated pursuant to the provisions of **Section 9.1**, and subject to the satisfaction or waiver of the conditions set forth in **Sections 6**, **7** and **8**, the consummation of the Merger (the "***Closing***") shall take place at the offices of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, as promptly as practicable (but in no event later than the second Business Day following the satisfaction or waiver of the last to be satisfied or waived of the conditions set forth in **Articles 6**, **7** and **8**, other than those conditions that by their nature are to be satisfied at the Closing, but subject to the satisfaction or waiver of each of such conditions), or at such other time, date and place as Organovo and Buyer may mutually agree in writing. The date on which the Closing actually takes place is referred to as the "***Closing Date.***" At the Closing, the Parties hereto shall cause the Merger to be consummated by executing and filing with the Secretary of State of the State of Delaware a Certificate of Merger with respect to the Merger, satisfying the applicable requirements of the DGCL and in a form reasonably acceptable to Organovo and Buyer (the "***Certificate of Merger***"). The Merger shall become effective at the time of the filing of such Certificate of Merger with the Secretary of State of the State of Delaware or at such later time as may be specified in such Certificate of Merger with the consent of Organovo and Buyer (the time as of which the Merger becomes effective being referred to as the "***Effective Time***").

1.4 Certificate of Incorporation and Bylaws; Directors and Officers. At the Effective Time:

(a) the Certificate of Incorporation of the Surviving Corporation shall be amended and restated in its entirety to read identically to the Certificate of Incorporation of Merger Sub as in effect immediately prior to the Effective Time, until thereafter amended as provided by the DGCL and such Certificate of Incorporation;

(b) the Certificate of Incorporation of Organovo shall be identical to the Certificate of Incorporation of Organovo as in effect immediately prior to the Effective Time, until thereafter amended as provided by the DGCL and such Certificate of Incorporation; *provided*, *however*, that at the Effective Time, Organovo shall file one or more amendments to its Certificate of Incorporation to (i) change the name of Organovo to "Tarveda Therapeutics, Inc." (the "***Corporate Name Change***") and (ii) effect the Reverse Split (to the extent applicable and necessary).

(c) the Bylaws of the Surviving Corporation shall be identical to the Bylaws of Merger Sub as in effect immediately prior to the Effective Time, until thereafter amended as provided by the DGCL and such Bylaws; and

(d) the directors and officers of the Surviving Corporation, each to hold office in accordance with the Certificate of Incorporation and Bylaws of the Surviving Corporation, shall be the directors and officers as set forth in **Section 5.14**, after giving effect to the provisions of **Section 5.14**.

1.5 Conversion of Buyer Shares, Options and Warrants.

(a) At the Effective Time, by virtue of the Merger and without any further action on the part of Organovo, Merger Sub, Buyer or any stockholder of Organovo or Buyer:

(i) any Buyer Capital Stock held as treasury stock or held or owned by Buyer, Merger Sub or any Subsidiary of Buyer immediately prior to the Effective Time shall be canceled and retired and shall cease to exist, and no consideration shall be delivered in exchange therefor; and

(ii) subject to **Section 1.5(c)**, each share of Buyer Common Stock outstanding immediately prior to the Effective Time (excluding shares to be canceled pursuant to **Section 1.5(a)(i)** and excluding Dissenting Shares) shall be converted solely into the right to receive a number of shares of Organovo Common Stock equal to the Exchange Ratio.

(b) If any shares of Buyer Common Stock outstanding immediately prior to the Effective Time are unvested or are subject to a repurchase option or the risk of forfeiture under any applicable restricted stock purchase agreement or other agreement with Buyer, then the shares of Organovo Common Stock issued in exchange for such Buyer Common Stock will to the same extent be unvested and subject to the same repurchase option or risk of forfeiture, and the certificates representing such Organovo Common Stock shall accordingly be marked with appropriate legends. Buyer shall take all actions that may be necessary to ensure that, from and after the Effective Time, Organovo is entitled to exercise any such repurchase option or other right set forth in any such restricted stock purchase agreement or other agreement.

(c) No fractional shares of Organovo Common Stock shall be issued in connection with the Merger, and no certificates or scrip for any such fractional shares shall be issued. Any holder of Buyer Common Stock who would otherwise be entitled to receive a fraction of a share of Organovo Common Stock (after aggregating all fractional shares of Organovo Common Stock issuable to such holder) shall, in lieu of such fraction of a share and upon surrender by such holder of a letter of transmittal in accordance with **Section 1.7** and accompanying documents as required therein, be paid in cash the dollar amount (rounded to the nearest whole cent), without interest, determined by multiplying such fraction by the closing price of a share of Organovo Common Stock on The Nasdaq Global Market (or such other Nasdaq market on which the Organovo Common Stock then trades) on the date the Merger becomes effective.

(d) All Buyer Options outstanding immediately prior to the Effective Time under the Equity Incentive Plan and all Buyer Warrants outstanding immediately prior to the Effective Time shall be exchanged for options to purchase Organovo Common Stock or warrants to purchase Organovo Common Stock, as applicable, in accordance with **Section 5.5**.

(e) Each share of Common Stock, $0.001 par value per share, of Merger Sub issued and outstanding immediately prior to the Effective Time shall be converted into and exchanged for one validly issued, fully paid and nonassessable share of Common Stock, $0.001 par value per share, of the Surviving Corporation. Each stock certificate of Merger Sub evidencing ownership of any such shares shall, as of the Effective Time, evidence ownership of such shares of Common Stock of the Surviving Corporation.

(f) If, between the date of this Agreement and the Effective Time, the outstanding shares of Buyer Capital Stock or Organovo Common Stock shall have been changed into, or exchanged for, a different

number of shares or a different class, by reason of any stock dividend or any subdivision, reclassification, recapitalization, split (including the Reverse Split), combination or exchange of shares, the Exchange Ratio shall be correspondingly adjusted to provide the holders of Buyer Capital Stock, Buyer Options and Buyer Warrants the same economic effect as contemplated by this Agreement prior to such event.

1.6 Closing of Buyer's Transfer Books. At the Effective Time: (a) all shares of Buyer Common Stock, other than Dissenting Shares, outstanding immediately prior to the Effective Time shall be treated in accordance with **Section 1.5(a)**, and all holders of certificates representing shares of Buyer Common Stock that were outstanding immediately prior to the Effective Time shall cease to have any rights as stockholders of Buyer; and (b) the stock transfer books of Buyer shall be closed with respect to all shares of Buyer Common Stock outstanding immediately prior to the Effective Time. No further transfer of any such shares of Buyer Common Stock shall be made on such stock transfer books after the Effective Time. If, after the Effective Time, a valid certificate previously representing any shares of Buyer Common Stock including any valid certificate representing any Buyer Preferred Stock previously converted into Buyer Common Stock in connection with the Preferred Stock Conversion, outstanding immediately prior to the Effective Time (a "***Buyer Stock Certificate***") is presented to the Exchange Agent or to the Surviving Corporation, such Buyer Stock Certificate shall be canceled and shall be exchanged as provided in **Sections 1.5** and **1.8**.

1.7 Surrender of Certificates.

(a) On or prior to the Closing Date, Organovo and Buyer shall agree upon and select a reputable bank, transfer agent or trust company to act as exchange agent in the Merger (the "***Exchange Agent***"). At the Effective Time, Organovo shall deposit with the Exchange Agent: (i) certificates representing Organovo Common Stock or non-certificated shares of Organovo Common Stock represented by book entry that are issuable pursuant to **Section 1.5(a)** and (ii) cash sufficient to make payments in lieu of fractional shares in accordance with **Section 1.5(c)**. The shares of Organovo Common Stock and cash amounts so deposited with the Exchange Agent, together with any dividends or distributions received by the Exchange Agent with respect to such shares, are referred to collectively as the "***Exchange Fund.***"

(b) At or before the Effective Time, Buyer will deliver to Organovo a true, complete and accurate listing of all record holders of Buyer Stock Certificates at the Effective Time, including the number and class of shares of Buyer Capital Stock held by such record holder, and the number of shares of Organovo Common Stock such holder is entitled to receive pursuant to **Section 1.5**. Promptly after the Effective Time, the Parties shall cause the Exchange Agent to mail to the Persons who were record holders of Buyer Stock Certificates immediately prior to the Effective Time: (i) a letter of transmittal in customary form and containing such provisions as Organovo may reasonably specify (including a provision confirming that delivery of Buyer Stock Certificates shall be effected, and risk of loss and title to Buyer Stock Certificates shall pass, only upon delivery of such Buyer Stock Certificates to the Exchange Agent); and (ii) instructions for effecting the surrender of Buyer Stock Certificates in exchange for certificated or non-certificated book entry shares representing shares of Organovo Common Stock. Upon surrender of a Buyer Stock Certificate to the Exchange Agent for exchange, together with a duly executed letter of transmittal and such other documents as may be reasonably required by the Exchange Agent or Organovo: (A) the holder of such Buyer Stock Certificate shall be entitled to receive in exchange therefor a certificate or book entry representing the number of whole shares of Organovo Common Stock that such holder has the right to receive pursuant to the provisions of **Section 1.5(a)** (and cash in lieu of any fractional shares of Organovo Common Stock pursuant to the provisions of **Section 1.5(c)**); and (B) the Buyer Stock Certificate so surrendered shall be canceled. Until surrendered as contemplated by this **Section 1.8(b)**, each Buyer Stock Certificate shall be deemed, from and after the Effective Time, to represent only the right to receive a certificate or book entry representing shares of Organovo Common Stock (and cash in lieu of any fractional shares of Organovo Common Stock). If any Buyer Stock Certificate shall have been lost, stolen or destroyed, Buyer may, in its discretion and as a condition precedent to the delivery of any certificate or book entry representing shares of Organovo Common Stock, require the owner of such lost, stolen or destroyed Buyer Stock Certificate to provide an applicable affidavit with respect to such Buyer Stock Certificate.

(c) No dividends or other distributions declared or made with respect to Organovo Common Stock with a record date after the Effective Time shall be paid to the holder of any unsurrendered Buyer Stock Certificate with respect to the Organovo Common Stock that such holder has the right to receive in the Merger until such holder surrenders such Buyer Stock Certificate or an affidavit of loss or destruction in lieu thereof in accordance with this **Section 1.8** (at which time such holder shall be entitled, subject to the effect of applicable abandoned property, escheat or similar laws, to receive all such dividends and distributions, without interest).

(d) Any portion of the Exchange Fund that remains undistributed to holders of Buyer Stock Certificates as of the date 180 days after the Closing Date shall be delivered to Organovo upon demand, and any holders of Buyer Stock Certificates who have not theretofore surrendered their Buyer Stock Certificates in accordance with this **Section 1.8** shall thereafter look only to Organovo for satisfaction of their claims for Organovo Common Stock, cash in lieu of fractional shares of Organovo Common Stock and any dividends or distributions with respect to shares of Organovo Common Stock.

(e) Each of the Parties and the Exchange Agent shall be entitled to deduct and withhold from any consideration payable pursuant to this Agreement to any holder of any Buyer Stock Certificate or any other Person such amounts as are required to be deducted or withheld from such consideration under the Code or under any other applicable Legal Requirement and shall be entitled to request any reasonably appropriate Tax forms, including IRS Form W-9 (or the appropriate IRS Form W-8, as applicable), from any recipient of payments hereunder. To the extent such amounts are so deducted or withheld, and remitted to the appropriate taxing authority in accordance with applicable Law, such amounts shall be treated for all purposes under this Agreement as having been paid to the Person to whom such amounts would otherwise have been paid.

(f) No party to this Agreement shall be liable to any holder of any Buyer Stock Certificate or to any other Person with respect to any shares of Organovo Common Stock (or dividends or distributions with respect thereto) or for any cash amounts delivered to any public official pursuant to any applicable abandoned property law, escheat law or similar Legal Requirement.

1.8 Appraisal Rights.

(a) Notwithstanding any provision of this Agreement to the contrary, shares of Buyer Capital Stock that are outstanding immediately prior to the Effective Time and which are held by stockholders who have exercised and perfected appraisal rights for such shares of Buyer Capital Stock in accordance with the DGCL (collectively, the "***Dissenting Shares***") shall not be converted into or represent the right to receive the per share amount of the merger consideration described in **Section 1.5** attributable to such Dissenting Shares. Such stockholders shall be entitled to receive payment of the appraised value of such shares of Buyer Capital Stock held by them in accordance with the DGCL, unless and until such stockholders fail to perfect or effectively withdraw or otherwise lose their appraisal rights under the DGCL. All Dissenting Shares held by stockholders who shall have failed to perfect or who effectively shall have withdrawn or lost their right to appraisal of such shares of Buyer Capital Stock under the DGCL shall thereupon be deemed to be converted into and to have become exchangeable for, as of the Effective Time, the right to receive the per share amount of the merger consideration attributable to such Dissenting Shares upon their surrender in the manner provided in **Section 1.5**.

(b) Buyer shall give Organovo prompt written notice of any demands by dissenting stockholders received by Buyer, withdrawals of such demands and any other instruments served on Buyer and any material correspondence received by Buyer in connection with such demands.

1.9 Further Action. If, at any time after the Effective Time, any further action is determined by the Surviving Corporation to be necessary or desirable to carry out the purposes of this Agreement or to vest the Surviving Corporation with full right, title and possession of and to all rights and property of Buyer, then the officers and directors of the Surviving Corporation shall be fully authorized, and shall use their commercially reasonable efforts (in the name of Buyer, Merger Sub and otherwise) to take such action.

1.10 Tax Consequences. For U.S. federal income Tax purposes, the Merger is intended to constitute a "reorganization" within the meaning of Section 368(a) of the Code and the Treasury Regulations promulgated thereunder. The parties to this Agreement adopt this Agreement as a "***plan of reorganization***" for purposes of Section 354 and 361 of the Code and Treasury Regulations Section 1.368-2(g) and 1.368-3(a), to which Organovo, Merger Sub and Buyer are parties under Section 368(b) of the Code.

ARTICLE 2

REPRESENTATIONS AND WARRANTIES OF BUYER

Buyer represents and warrants to Organovo as follows, except as set forth in the written disclosure schedule delivered by Buyer to Organovo (the "***Buyer Disclosure Schedule***"). The Buyer Disclosure Schedule shall be arranged in sections and subsections corresponding to the numbered and lettered sections and subsections contained in this **Article 2**. The disclosures in any section or subsection of the Buyer Disclosure Schedule shall qualify other sections and subsections in this **Article 2** to the extent it is reasonably clear from a reading of the disclosure that such disclosure is applicable to such other sections and subsections. The inclusion of any information in the Buyer Disclosure Schedule (or any update thereto) shall not be deemed to be an admission or acknowledgment, in and of itself, that such information is required by the terms hereof to be disclosed, is material, has resulted in or would result in a Buyer Material Adverse Effect, or is outside the Ordinary Course of Business.

2.1 Subsidiaries; Due Organization; Etc.

(a) Buyer has no Subsidiaries, except for the Entities identified in Part 2.1(a) of the Buyer Disclosure Schedule (the "***Buyer Subsidiaries***"); and neither Buyer nor any of the other Entities identified in Part 2.1(a) of the Buyer Disclosure Schedule owns any capital stock of, or any equity interest of any nature in, any other Entity, other than the Entities identified in Part 2.1(a) of the Buyer Disclosure Schedule. Buyer has not agreed nor is obligated to make, nor is bound by any Contract under which it may become obligated to make, any future investment in or capital contribution to any other Entity. Buyer has not, at any time, been a general partner of, or has otherwise been liable for any of the debts or other obligations of, any general partnership, limited partnership or other Entity.

(b) Each of Buyer and the Buyer Subsidiaries is a corporation duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and has all necessary power and authority: (i) to conduct its business in the manner in which its business is currently being conducted; (ii) to own and use its assets in the manner in which its assets are currently owned and used; and (iii) to perform its obligations under all Contracts by which it is bound.

(c) Each of Buyer and the Buyer Subsidiaries is qualified to do business as a foreign corporation, and is in good standing, under the laws of all jurisdictions where the nature of its business requires such qualification other than in jurisdictions where the failure to be so qualified individually or in the aggregate would not be reasonably expected to have a Buyer Material Adverse Effect.

2.2 Certificate of Incorporation; Bylaws; Charters and Codes of Conduct. Buyer has delivered to Organovo accurate and complete copies of the certificate of incorporation, bylaws and other charter and organizational documents, including all currently effective amendments thereto, for Buyer and each Buyer Subsidiary. Neither Buyer nor any Buyer Subsidiary has taken any action in breach or violation in any material respect of any of the material provisions of its certificate of incorporation, bylaws and other charter and organizational documents nor is in breach or violation in any material respect of any of the material provisions of its certificate of incorporation, bylaws and other charter and organizational documents.

2.3 Capitalization, Etc.

(a) The authorized capital stock of Buyer as of the date of this Agreement consists of (i) 3,483,900,000 shares of common stock, $0.0001 par value, of which 35,276,069 shares have been issued and are outstanding as of the date of this Agreement, and (ii) 117,147,928 shares of Buyer Preferred Stock, 59,326 of which have been designated Series A Preferred Stock, 450,913 of which have been designated Series B Preferred Stock, 77,169 of which have been designated Series B-1 Preferred Stock, 24,629,117 of which have been designated Series C Preferred Stock, 26,627,713 of which have been designated Series D Preferred Stock, 12,518,789 of which have been designated Series 1 Preferred Stock and 52,784,901 of which have been designated Series CS Preferred Stock. There are 58,306 issued and outstanding shares of Series A Preferred Stock as of the date of this Agreement, 450,228 issued and outstanding shares of Series B Preferred Stock as of the date of this Agreement, 57,163 issued and outstanding shares of Series B-1 Preferred Stock as of the date of this Agreement, 24,422,868 issued and outstanding shares of Series C Preferred Stock as of the date of this Agreement, 26,423,369 issued and outstanding shares of Series D Preferred Stock as of the date of this Agreement, 12,382,559 issued and outstanding shares of Series 1 Preferred Stock as of the date of this Agreement and 52,784,901 issued and outstanding shares of Series CS Preferred Stock as of the date of this Agreement. Buyer does not hold any shares of its capital stock in its treasury. All of the outstanding shares of Buyer Capital Stock have been duly authorized and validly issued, and are fully paid and nonassessable. Except as set forth in Part 2.3(a)(i) of the Buyer Disclosure Schedule, none of the outstanding shares of Buyer Capital Stock is entitled or subject to any preemptive right, right of participation, right of maintenance or any similar right and none of the outstanding shares of Buyer Capital Stock is subject to any right of first refusal in favor of Buyer. Except as contemplated herein or as set forth in Part 2.3(a) of the Buyer Disclosure Schedule, there is no Buyer Contract relating to the voting or registration of, or restricting any Person from purchasing, selling, pledging or otherwise disposing of (or granting any option or similar right with respect to), any Buyer Capital Stock. Buyer is not under any obligation, nor is it bound by any Contract pursuant to which it may become obligated, to repurchase, redeem or otherwise acquire any outstanding shares of Buyer Capital Stock or other securities. Part 2.3(a)(ii) of the Buyer Disclosure Schedule accurately and completely describes all repurchase rights held by Buyer with respect to shares of Buyer Capital Stock (including shares issued pursuant to the exercise of stock options) and specifies which of those repurchase rights are currently exercisable.

(b) Except for the Buyer's 2011 Stock Incentive Plan (the "***Equity Incentive Plan***"), and except as set forth in Part 2.3(b) of the Buyer Disclosure Schedule, Buyer does not have any stock option plan or any other plan, program, agreement or arrangement providing for any equity-based compensation for any Person. Buyer has reserved 18,323,508 shares of Buyer Common Stock for issuance under the Equity Incentive Plan. Of such reserved shares of Buyer Common Stock, 1,988,055 shares have been issued pursuant to the exercise of outstanding options and/or restricted stock agreements, options to purchase 14,551,126 shares have been granted and are currently outstanding, and 1,784,327 shares remain available for future issuance pursuant to the Equity Incentive Plan. Part 2.3(b) of the Buyer Disclosure Schedule sets forth the following information with respect to each Buyer Option outstanding as of the date of this Agreement: (A) the name of the optionee; (B) the number of shares of Buyer Common Stock subject to such Buyer Option at the time of grant; (C) the number of shares of Buyer Common Stock subject to such Buyer Option as of the date of this Agreement; (D) the exercise price of such Buyer Option; (E) the date on which such Buyer Option was granted; (F) the applicable vesting schedule, including the number of vested and unvested shares subject to such Buyer Option; (G) the date on which such Buyer Option expires; and (H) whether such Buyer Option is intended to be an "incentive stock option" (as defined in the Code) or a non-qualified stock option. Buyer has made available to Organovo an accurate and complete copy of the Equity Incentive Plan and all forms of stock option agreements approved for use thereunder. No vesting of Buyer Options will accelerate in connection with the closing of the Contemplated Transactions.

(c) Except for the outstanding Buyer Options as set forth in **Section 2.3(b)**, for the warrants identified on Part 2.3(c) of the Buyer Disclosure Schedule (the "***Buyer Warrants***") or as set forth on Part 2.3(c) of the Buyer Disclosure Schedule, there is no: (i) outstanding subscription, option, call, warrant or right (whether

or not currently exercisable) to acquire any shares of the capital stock or other securities of Buyer or any of its Subsidiaries; (ii) outstanding security, instrument or obligation that is or may become convertible into or exchangeable for any shares of the capital stock or other securities of Buyer or any of its Subsidiaries; (iii) stockholder rights plan (or similar plan commonly referred to as a "poison pill") or Contract under which Buyer or any of its Subsidiaries is or may become obligated to sell or otherwise issue any shares of its capital stock or any other securities; or (iv) condition or circumstance that may give rise to or provide a basis for the assertion of a claim by any Person to the effect that such Person is entitled to acquire or receive any shares of capital stock or other securities of Buyer or any of its Subsidiaries. There are no outstanding or authorized stock appreciation, phantom stock, profit participation or other similar rights with respect to Buyer or any of its Subsidiaries.

(d) All outstanding shares of Buyer Capital Stock, as well as all options, warrants and other securities of Buyer, have been issued and granted in material compliance with (i) all applicable securities laws and other applicable Legal Requirements and (ii) all requirements set forth in applicable Contracts. Buyer has delivered to Organovo accurate and complete copies of all Buyer Warrants. Except as identified on Part 2.3(c) of the Buyer Disclosure Schedule, there are no warrants to purchase capital stock of Buyer outstanding on the date of this Agreement.

2.4 Financial Statements.

(a) Part 2.4(a) of the Buyer Disclosure Schedule includes true and complete copies of (i) Buyer's audited consolidated balance sheets at December 31, 2017 and December 31, 2018, (ii) the Buyer Unaudited Interim Balance Sheet, (iii) Buyer's audited consolidated statements of income, cash flow and stockholders' equity for the years ended December 31, 2018 and December 31, 2017, and (iv) Buyer's unaudited statements of income and cash flow for the nine months ended September 30, 2019 (collectively, the "***Buyer Financials***"). The Buyer Financials (i) were prepared in accordance with United States generally accepted accounting principles ("***GAAP***") (except as may be indicated in the footnotes to such Buyer Financials and that unaudited financial statements may not have notes thereto and other presentation items that may be required by GAAP and are subject to normal and recurring year-end adjustments that are not reasonably expected to be material in amount) applied on a consistent basis with Buyer's past practice unless otherwise noted therein throughout the periods indicated and (ii) fairly present in all material respects the financial condition and operating results of Buyer and its consolidated Subsidiaries as of the dates and for the periods indicated therein.

(b) Each of Buyer and its Subsidiaries maintains a system of internal accounting controls designed to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Buyer and each of its Subsidiaries maintains internal control over financial reporting that provides reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP.

(c) Part 2.4(c) of the Buyer Disclosure Schedule lists, and Buyer has delivered to Organovo accurate and complete copies of the documentation creating or governing, all securitization transactions and "off-balance sheet arrangements" (as defined in Item 303(c) of Regulation S-K under the Exchange Act) effected by Buyer or any of its Subsidiaries since January 1, 2017.

(d) Since January 1, 2017, there have been no formal internal investigations regarding financial reporting or accounting policies and practices discussed with, reviewed by or initiated at the direction of the chief executive officer, chief financial officer or general counsel of Buyer, Buyer's Board of Directors or any committee thereof. Since January 1, 2017, the Buyer has not identified, nor have Buyer's independent auditors

identified to Buyer, (i) any significant deficiency or material weakness in the system of internal accounting controls utilized by Buyer and the Buyer Subsidiaries, (ii) any fraud, whether or not material, that involves Buyer's management or other employees who have a role in the preparation of financial statements or the internal accounting controls utilized by Buyer and the Buyer Subsidiaries or (iii) any claim or allegation regarding any of the foregoing.

2.5 Absence of Changes. Except as set forth on Part 2.5 of the Buyer Disclosure Schedule, between December 31, 2018 and the date of this Agreement and except as otherwise expressly contemplated by this Agreement:

(a) there has not been any Buyer Material Adverse Effect or an event or development that would, individually or in the aggregate, reasonably be expected to have a Buyer Material Adverse Effect;

(b) there has not been any material loss, damage or destruction to, or any material interruption in the use of, any of the material assets or business of Buyer or any Buyer Subsidiary (whether or not covered by insurance);

(c) Buyer has not: (i) declared, accrued, set aside or paid any dividend or made any other distribution in respect of any shares of capital stock; or (ii) repurchased, redeemed or otherwise reacquired any shares of capital stock or other securities, except for the repurchase or reacquisition of shares pursuant to the terms of the Equity Incentive Plan arising upon an individual's termination as an employee, director or consultant;

(d) Other than the ordinary course issuance of employee equity grants in the ordinary course pursuant to the Equity Incentive Plan, Buyer has not sold, issued or granted, or authorized the issuance of: (i) any Buyer Capital Stock or other security (except for shares of Buyer Common Stock issued upon the valid exercise of outstanding Buyer Options); (ii) any option, warrant or right to acquire any capital stock or any other security (except for the Buyer Options identified in Part 2.3(b) of the Buyer Disclosure Schedule); or (iii) any instrument convertible into or exchangeable for any capital stock or other security (except for the Buyer Options identified in Part 2.3(b) of the Buyer Disclosure Schedule);

(e) there has been no amendment to the certificate of incorporation, bylaws or other charter or organizational documents of Buyer or any Buyer Subsidiary, and neither Buyer nor any Buyer Subsidiary has effected or been a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction;

(f) Buyer has not amended or waived any of its rights under, or exercised its discretion to permit the acceleration of vesting under any provision of: (i) the Equity Incentive Plan; (ii) any Buyer Option or any Contract evidencing or relating to any Buyer Option; (iii) any restricted stock purchase agreement; or (iv) any other Contract evidencing or relating to any equity award (whether payable in cash or stock);

(g) Neither Buyer nor any Buyer Subsidiary has formed any Subsidiary or acquired any equity interest or other interest in any other Entity;

(h) Neither Buyer nor any Buyer Subsidiary has: (i) lent money to any Person; (ii) incurred or guaranteed any indebtedness; (iii) issued or sold any debt securities or options, warrants, calls or other rights to acquire any debt securities; (iv) guaranteed any debt securities of others; or (v) made any capital expenditure or commitment in excess of $100,000;

(i) Neither Buyer nor any Buyer Subsidiary has changed any of its accounting methods, principles or practices in any material respect;

(j) Neither Buyer nor any Buyer Subsidiary has made, changed or revoked any material Tax election, filed any material amendment to any Tax Return, adopted or changed any accounting method in respect of Taxes, changed any annual Tax accounting period, entered into any Tax allocation agreement, Tax sharing agreement or Tax indemnity agreement (other than commercial Contracts entered into in the Ordinary Course of Business the principal subject matter of which is not Taxes) entered into any closing agreement with respect to any Tax, settled or compromised any claim, notice, audit report or assessment in respect of material Taxes, applied for or entered into any ruling from any Tax authority with respect to Taxes, surrendered any right to claim a material Tax refund, or consented to any extension or waiver of the statute of limitations period applicable to any material Tax claim or assessment;

(k) Neither Buyer nor any Buyer Subsidiary has commenced or settled any Legal Proceeding;

(l) Neither Buyer nor any Buyer Subsidiary has entered into any material transaction outside the Ordinary Course of Business;

(m) Neither Buyer nor any Buyer Subsidiary has acquired any material assets nor sold, leased or otherwise irrevocably disposed of any of its material assets or properties, nor has any Encumbrance been granted with respect to such assets or properties, except for Encumbrances of immaterial assets in the Ordinary Course of Business consistent with past practices;

(n) there has been no entry into, amendment or termination of any Buyer Material Contract;

(o) there has been no (i) material change in pricing or royalties or other payments set or charged by Buyer or any Buyer Subsidiary to its customers or licensees, (ii) agreement by Buyer or any Buyer Subsidiary to change pricing or royalties or other payments set or charged by persons who have licensed Intellectual Property to Buyer or any Buyer Subsidiary, or (iii) material change in pricing or royalties or other payments set or charged by persons who have licensed Intellectual Property to Buyer or any Buyer Subsidiary; and

(p) Neither Buyer nor any Buyer Subsidiary has negotiated, agreed or committed to take any of the actions referred to in clauses "***(c)***" through "***(o)***" above (other than negotiations between the Parties to enter into this Agreement).

2.6 Title to Assets. Each of Buyer and the Buyer Subsidiaries owns, and has good and valid title to, or, in the case of leased properties and assets, valid leasehold interests in, all material tangible properties or assets and equipment used or held for use in its business or operations or purported to be owned by it. All such assets are owned by Buyer or a Buyer Subsidiary free and clear of any Encumbrances, except for: (i) any lien for current Taxes not yet due and payable or for Taxes that are being contested in good faith and for which adequate reserves have been made on the Buyer Unaudited Interim Balance Sheet; (ii) minor liens that have arisen in the Ordinary Course of Business and that do not (in any case or in the aggregate) materially detract from the value of the assets subject thereto or materially impair the operations of Buyer or any Buyer Subsidiary; and (iii) liens listed in Part 2.6 of the Buyer Disclosure Schedule.

2.7 Real Property; Leasehold. Neither Buyer nor any Buyer Subsidiary owns any real property or any interest in real property, except for the leaseholds created under the real property leases identified in Part 2.7 of the Buyer Disclosure Schedule which are in full force and effect and with no existing default thereunder.

2.8 Intellectual Property.

(a) Part 2.8(a) of the Buyer Disclosure Schedule lists all Buyer Registered Intellectual Property, including the jurisdictions in which each such item of Intellectual Property has been issued or registered, in which any application for such issuance and registration has been filed, or in which any other filing or recordation has been made. Buyer has taken reasonable actions to maintain and protect such Buyer Registered

Intellectual Property. As of the date hereof, all registration, maintenance and renewal fees currently due in connection with such Buyer Registered Intellectual Property have been paid and all documents, recordations and certificates in connection with such Buyer Registered Intellectual Property currently required to be filed have been filed with the relevant patent, copyright, trademark or other authorities in the United States or foreign jurisdictions, as the case may be, for the purposes of prosecuting, maintaining and perfecting such Buyer Registered Intellectual Property and recording Buyer's ownership interests therein.

(b) Buyer and the Buyer Subsidiaries own each item of Buyer-Owned IP Rights, free and clear of any Encumbrances.

(c) To the Knowledge of Buyer, the operation of the business of Buyer and the Buyer Subsidiaries as such business is currently conducted, as has been conducted since January 1, 2016, and as proposed to be conducted by Buyer, does not infringe, misappropriate, or violate any Third-Party IP Rights. As of the date hereof, Buyer has not received any written notice, which involves a claim of infringement or misappropriation of any Third-Party IP Rights. Notwithstanding anything to the contrary, no provision of this Agreement shall be construed as a representation or warranty of Buyer against the infringement, misappropriation or violation of the Intellectual Property of any third party.

(d) To the Knowledge of Buyer, there is no unauthorized use, unauthorized disclosure, infringement or misappropriation of any Buyer-Owned IP Rights, by any third party. As of the date hereof, Buyer has not instituted any Legal Proceedings for infringement or misappropriation of any Buyer-Owned IP Rights.

(e) Each consultant and employee involved in the creation of any material Buyer-Owned IP Rights for Buyer has executed proprietary information, confidentiality and assignment agreements that, to extent permitted by Law, assign to Buyer and/or a Buyer Subsidiary (or otherwise grant sufficient rights in) all Intellectual Property that are developed by the employees in the course of their employment, and, with respect to consultants, all Intellectual Property that are developed by such consultants in the course of performing services for Buyer or any Buyer Subsidiaries. Buyer has provided to Organovo copies of all such forms currently and historically used by Buyer.

(f) To the Knowledge of Buyer, no (i) government funding or (ii) facilities of a university, college, other educational institution or research center were used in the development of the Buyer-Owned IP Rights. To the Knowledge of Buyer, no current or former employee, consultant or independent contractor of Buyer, who was involved in, or who contributed to, the creation or development of any Buyer-Owned IP Rights, has performed services for any government, university, college or other educational institution or research center during a period of time during which such employee, consultant or independent contractor was also performing services for Buyer.

(g) Neither the execution and delivery or effectiveness of this Agreement nor the performance of Buyer's obligations under this Agreement will cause (a) the forfeiture or termination of, or give rise to a right of forfeiture or termination of any Buyer-Owned IP Right, or (b) additional payment obligations by Buyer in order to use or exploit Buyer-Owned IP Rights to the same extent as Buyer was permitted before the date hereof.

(h) Buyer has taken commercially reasonable steps to protect and preserve the confidentiality of all confidential or non-public information included in the Buyer IP Rights that Buyer intends to retain as confidential ("***Buyer Confidential Information***"). To the Knowledge of Buyer, all use and/or disclosure of Buyer Confidential Information by or to a third party has been pursuant to the terms of a written Contract between Buyer or its Subsidiaries and such third party.

(i) Notwithstanding anything to the contrary contained herein, the representations and warranties contained in Section 2.8 are the only representations and warranties made by Buyer that address matters relating to Intellectual Property.

2.9 Agreements, Contracts and Commitments. Part 2.9 of the Buyer Disclosure Schedule identifies:

(a) each Buyer Contract relating to any bonus, deferred compensation, severance, incentive compensation, pension, profit-sharing or retirement plans, or any other employee benefit plans or arrangements, other than Buyer Contracts on Buyer's standard form offer letter entered into in the Ordinary Course of Business;

(b) each Buyer Contract relating to the employment of, or the performance of employment-related services by, any Person, including any employee, consultant or independent contractor, not terminable by Buyer or its Subsidiaries on ninety (90) days' notice without liability, except to the extent general principles of wrongful termination law may limit Buyer's, Buyer's Subsidiaries' or such successor's ability to terminate employees at will;

(c) each Buyer Contract relating to any agreement or plan, including any stock option plan, stock appreciation right plan or stock purchase plan, any of the benefits of which will be increased, or the vesting of benefits of which will be accelerated, by the occurrence of any of the Contemplated Transactions (either alone or in conjunction with any other event, such as termination of employment), or the value of any of the benefits of which will be calculated on the basis of any of the Contemplated Transactions;

(d) each Buyer Contract relating to any agreement of indemnification or guaranty not entered into in the Ordinary Course of Business other than indemnification agreements between Buyer and any of its officers or directors;

(e) each Buyer Contract relating to any agreement, contract or commitment containing any covenant limiting the freedom of Buyer, its Subsidiaries or the Surviving Corporation to engage in any line of business or compete with any Person;

(f) each Buyer Contract relating to any agreement, contract or commitment relating to capital expenditures and involving obligations after the date of this Agreement in excess of $250,000 and not cancelable without penalty;

(g) each Buyer Contract relating to any agreement, contract or commitment currently in force relating to the disposition or acquisition of material assets or any ownership interest in any Entity;

(h) each Buyer Contract relating to any mortgages, indentures, loans, notes or credit agreements, security agreements or other agreements or instruments relating to the borrowing of money or extension of credit in excess of $100,000 or creating any material Encumbrances with respect to any assets of Buyer or any Buyer Subsidiary or any loans or debt obligations with officers or directors of Buyer;

(i) all Contracts pursuant to which Buyer grants any Person a license under any Buyer-Owned IP Rights, other than software licensed to customers in the Ordinary Course of Business;

(j) other than "shrink wrap" and similar generally available commercial end-user licenses to software, all Contracts pursuant to which Buyer or a Buyer Subsidiary is licensed to use any Third-Party IP Rights outside the Ordinary Course of Business;

(k) each Buyer Contract (i) appointing a third party to distribute any Buyer product, service or technology (identifying any that contain exclusivity provisions); (ii) for a third party to provide services or products with respect to any pre-clinical or clinical development activities of Buyer (iii) under which Buyer or its Subsidiaries has continuing obligations to develop or market any product, technology or service, or any agreement pursuant to which Buyer or its Subsidiaries has continuing obligations to develop any Intellectual Property that will not be owned, in whole or in part, by Buyer or such Buyer Subsidiary; or (iv) to license any third party to manufacture or produce any Buyer product, service or technology or any Contract to sell, distribute or commercialize any Buyer products or service except agreements in the Ordinary Course of Business;

(l) each Buyer Contract with any financial advisor, broker, finder, investment banker or other Person providing advisory services to Buyer in connection with the Contemplated Transactions; or

(m) any other agreement, contract or commitment which is not terminable at will (with no penalty or payment) by Buyer which involves payment or receipt by Buyer or its Subsidiaries under any such agreement, contract or commitment of $250,000 or more in the aggregate or obligations after the date of this Agreement in excess of $250,000 in the aggregate. Buyer has delivered or made available to Organovo accurate and complete (except for applicable redactions thereto) copies of all Buyer Material Contracts, including all amendments thereto. There are no Buyer Material Contracts that are not in written form. Except as set forth on Part 2.9 of the Buyer Disclosure Schedule, neither Buyer nor any of its Subsidiaries has, nor to Buyer's Knowledge, as of the date of this Agreement has any other party to a Buyer Material Contract, breached, violated or defaulted under, or received written notice that it has breached, violated or defaulted under, any of the terms or conditions of any of the agreements, contracts or commitments to which Buyer or its Subsidiaries is a party or by which it is bound of the type described in clauses (a) through (l) above (any such agreement, contract or commitment, a "***Buyer Material Contract***") in such manner as would permit any other party to cancel or terminate any such Buyer Material Contract, or would permit any party to cancel or terminate any Buyer Material Contract, or would permit any other party to seek damages which would reasonably be expected to have a Buyer Material Adverse Effect. The consummation of the Contemplated Transactions shall not (either alone or upon the occurrence of additional acts or events) result in any material payment or payments becoming due from Buyer, any Buyer Subsidiary or the Surviving Corporation to any Person under any Buyer Contract.

2.10 Liabilities. As of the date hereof, neither Buyer nor any Buyer Subsidiary has any liability, indebtedness, obligation, expense, claim, deficiency, guaranty or endorsement of any kind, whether accrued, absolute, contingent, matured, unmatured or other (required to be reflected in the financial statements in accordance with GAAP) (each a "***Liability***"), except for: (a) Liabilities identified as such in the Buyer Unaudited Interim Balance Sheet; (b) normal and recurring current Liabilities that have been incurred by Buyer or its Subsidiaries since the date of the Buyer Unaudited Interim Balance Sheet in the Ordinary Course of Business and which are not in excess of $100,000 in the aggregate; (c) Liabilities for performance in the Ordinary Course of Business of obligations of Buyer or any Buyer Subsidiary under Buyer Contracts, including the reasonably expected performance of such Buyer Contracts in accordance with their terms (which would not include, for example, any instances of breach or indemnification); (d) Liabilities incurred in connection with the Contemplated Transactions; and (e) Liabilities described in Part 2.10 of the Buyer Disclosure Schedule.

2.11 Compliance; Permits; Restrictions.

(a) Buyer and each Buyer Subsidiary are, and since January 1, 2017 have been, in compliance in all material respects with all applicable Legal Requirements. No investigation, claim, suit, proceeding, audit or other action by any Governmental Body or authority is pending or, to the Knowledge of Buyer, threatened in writing against Buyer or any Buyer Subsidiary. There is no agreement, judgment, injunction, order or decree binding upon Buyer or any Buyer Subsidiary which (i) has or would reasonably be expected to have the effect of prohibiting or materially impairing any business practice of Buyer or any Buyer Subsidiary, any acquisition of material property by Buyer or any Buyer Subsidiary or the conduct of business by Buyer or any Buyer Subsidiary as currently conducted, (ii) may have an adverse effect on Buyer's ability to comply with or perform any covenant or obligation under this Agreement, or (iii) may have the effect of preventing, delaying, making illegal or otherwise interfering with the Contemplated Transactions.

(b) Except for matters regarding the Food and Drug Administration ("***FDA***") and except as would not reasonably be expected to have a Buyer Material Adverse Effect, Buyer and the Buyer Subsidiaries hold all required Governmental Authorizations which are material to the operation of the business of Buyer (the "***Buyer Permits***") as currently conducted. Part 2.11(b) of the Buyer Disclosure Schedule identifies each Buyer Permit. Each of Buyer and each Buyer Subsidiary is in material compliance with the terms of the Buyer Permits, except as would not reasonably be expected to have a Buyer Material Adverse Effect. No action, proceeding,

revocation proceeding, amendment procedure, writ, injunction or claim is pending or, to the Knowledge of Buyer, threatened in writing, which seeks to revoke, limit, suspend, or materially modify any Buyer Permit. The rights and benefits of each material Buyer Permit will be available to the Surviving Corporation immediately after the Effective Time on terms substantially identical to those enjoyed by Buyer and its Subsidiaries as of the date of this Agreement and immediately prior to the Effective Time.

(c) There are no proceedings pending or, to the Knowledge of Buyer, threatened in writing with respect to an alleged material violation by Buyer or any of its Subsidiaries of the Federal Food, Drug, and Cosmetic Act ("***FDCA***"), FDA regulations adopted thereunder, the Controlled Substance Act or any other similar Legal Requirements promulgated by the FDA or other comparable Governmental Body responsible for regulation of the development, clinical testing, manufacturing, sale, marketing, distribution and importation or exportation of drug or medical device products ("***Drug/Device Regulatory Agency***").

(d) Buyer and each of its Subsidiaries holds all required Governmental Authorizations issuable by any Drug/Device Regulatory Agency necessary for the conduct of the business of Buyer or such Subsidiary as currently conducted, and, as applicable, development, clinical testing and manufacturing as currently conducted, of any of its product candidates (the "***Buyer Product Candidates***") (collectively, the "***Buyer Regulatory Permits***"), except as would not reasonably be expected to have a Buyer Material Adverse Effect, and no such Buyer Regulatory Permit has been (i) revoked, withdrawn, suspended, cancelled or terminated or (ii) modified in any materially adverse manner. Buyer and each Buyer Subsidiary is in compliance in all material respects with the Buyer Regulatory Permits and has not received any written notice or other written communication from any Drug/Device Regulatory Agency regarding (A) any material violation of or failure to comply materially with any term or requirement of any Buyer Regulatory Permit or (B) any revocation, withdrawal, suspension, cancellation, termination or material modification of any Buyer Regulatory Permit.

(e) To the Knowledge of Buyer, all clinical, pre-clinical and other studies and tests conducted by or on behalf of, or sponsored by, Buyer or its Subsidiaries or in which Buyer or its Subsidiaries or their respective current products or product candidates, including the Buyer Product Candidates, have participated were, and if still pending are being, conducted in all material respects in accordance with standard medical and scientific research procedures and in compliance with the applicable regulations of the Drug/Device Regulatory Agencies and other applicable Legal Requirements, including 21 C.F.R. Parts 50, 54, 56, 58 and 312.

(f) Neither Buyer nor any of the Buyer Subsidiaries is the subject of any pending, or to the Knowledge of Buyer or the Buyer Subsidiaries, threatened investigation in respect of its business or products by the FDA pursuant to its "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" Final Policy set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto. To the Knowledge of Buyer or any of the Buyer Subsidiaries, neither Buyer nor any of the Buyer Subsidiaries has committed any acts, made any statement, or failed to make any statement, in each case in respect of its business or products that would violate the FDA's "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" Final Policy, and any amendments thereto. None of Buyer, any of its Subsidiaries or any of their respective officers, employees or agents has been convicted of any crime or engaged in any conduct that could result in a debarment or exclusion (i) under 21 U.S.C. Section 335a or (ii) any similar applicable Legal Requirement. To the Knowledge of Buyer, no debarment or exclusionary claims, actions, proceedings or investigations in respect of their business or products are pending or threatened against Buyer, any Buyer Subsidiary or any of their respective officers, employees or agents.

2.12 Tax Matters.

(a) All income and other material Tax Returns required to have been filed by Buyer and each Buyer Subsidiary have been timely filed (taking into account any extension of time within which to file) with the applicable Governmental Body. All such Tax Returns were correct and complete in all material respects and have been prepared in material compliance with all applicable Legal Requirements. No claim has ever been made by

any Governmental Body in a jurisdiction where Buyer or any Buyer Subsidiary does not file Tax Returns that it is subject to taxation by that jurisdiction.

(b) All material Taxes due and owing by Buyer or any Buyer Subsidiary (whether or not shown on any Tax Return) have been paid. The unpaid Taxes of Buyer and any Buyer Subsidiary have been reserved for on the Buyer Unaudited Interim Balance Sheet in accordance with GAAP. Since the date of the Buyer Unaudited Interim Balance Sheet, neither Buyer nor any Buyer Subsidiary has incurred any Liability for Taxes outside the Ordinary Course of Business or otherwise inconsistent with past custom and practice.

(c) Buyer and each Buyer Subsidiary have withheld and paid all material Taxes required to have been withheld and paid in connection with any amounts paid or owing to any employee, independent contractor, creditor, stockholder or other third party.

(d) There are no material Encumbrances for Taxes (other than Taxes not yet due and payable or Taxes that are being contested in good faith and for which adequate reserves have been made on Buyer's Unaudited Interim Balance Sheet) upon any of the assets of Buyer or any Buyer Subsidiary.

(e) No material deficiencies for Taxes with respect to Buyer or any Buyer Subsidiary have been claimed, proposed or assessed by any Governmental Body in writing. There are no pending (or, based on written notice, threatened) audits, assessments or other actions for or relating to any liability in respect of Taxes of Buyer or any Buyer Subsidiary. Neither Buyer nor any Buyer Subsidiary has waived any statute of limitations in respect of Taxes, agreed to any extension of time with respect to a Tax assessment or deficiency or for filing any Tax Return, or consented to extend the period in which Tax may be assessed or collected by any Tax authority.

(f) Buyer has never been a United States real property holding corporation within the meaning of Section 897(c)(2) of the Code during the applicable period specified in Section 897(c)(1)(A)(ii) of the Code.

(g) Neither Buyer nor any Buyer Subsidiary is a party to any Tax allocation agreement, Tax sharing agreement, Tax indemnity agreement, or other similar agreement or arrangement (other than customary commercial Contracts entered into in the Ordinary Course of Business the principal subject matter of which is not Taxes).

(h) Neither Buyer nor any Buyer Subsidiary has ever been a member of an affiliated group filing a consolidated, combined or unitary Tax Return (other than a group the common parent of which is Buyer). Neither Buyer nor any Buyer Subsidiary has any Liability for the Taxes of any Person (other than Buyer and any Buyer Subsidiary) under Treasury Regulations section 1.1502-6 (or any similar provision of state, local, or non-U.S. law), as a transferee or successor, by Contract, or otherwise (other than customary commercial Contracts entered into in the Ordinary Course of Business the principal subject matter of which is not Taxes).

(i) Neither Buyer nor any Buyer Subsidiary has distributed stock of another Person, or had its stock distributed by another Person, in a transaction that was purported or intended to be governed in whole or in part by Section 355 of the Code or Section 361 of the Code (or any similar provision of state, local, or non-U.S. law).

(j) Neither Buyer nor any Buyer Subsidiary has entered into any transaction identified as a "listed transaction" for purposes of Treasury Regulations Sections 1.6011-4(b)(2).

(k) Neither Buyer nor any Buyer Subsidiary (i) is a "controlled foreign corporation" as defined in Section 957 of the Code, (ii) is a "passive foreign investment company" within the meaning of Section 1297 of the Code, (iii) has ever been subject to Tax in any country other than its country of incorporation or formation by virtue of having a permanent establishment (within the meaning of an applicable Tax treaty) or other place of business in such other country, or (iv) is or was a "surrogate foreign corporation" within the meaning of Section 7874(a)(2)(B) or is treated as a U.S. corporation under Section 7874(b) of the Code.

(l) Neither Buyer nor any Buyer Subsidiary will be required to include any material item of income in, or exclude any material item of deduction from, taxable income for any Tax period (or portion thereof) ending after the Closing Date as a result of any: (i) change in method of accounting for Tax purposes; (ii) use of an improper method of accounting for a Tax period ending on or prior to the Closing Date; (iii) "closing agreement" as described in Section 7121 of the Code (or any similar provision of state, local or foreign Law) executed on or prior to the Closing Date; (iv) intercompany transaction or excess loss account described in Treasury Regulations under Section 1502 of the Code (or any similar provision of state, local or foreign Law) consummated on or prior to the Closing Date; (v) installment sale or open transaction disposition made on or prior to the Closing Date; (vi) prepaid amount received on or prior to the Closing Date; or (vii) election under Section 108(i) of the Code (or any similar provision of state, local or foreign Law). Buyer has not made any election under Section 965(h) of the Code.

(m) Neither Buyer nor any Buyer Subsidiary has taken or agreed to take any action, or has any knowledge of any fact or circumstance, that could reasonably be expected to prevent the Merger from qualifying as a "reorganization" within the meaning of Section 368(a) of the Code.

2.13 Employee Benefit Plans.

(a) Part 2.13(a) of the Buyer Disclosure Schedule lists all material Buyer Employee Plans. "***Buyer Employee Plans***" shall mean: (i) all employee benefit plans (as defined in Section 3(3) of ERISA) and all bonus, stock option, stock purchase, restricted stock, incentive, deferred compensation, retiree medical or life insurance, supplemental retirement, severance or other material benefit plans, programs or arrangements, and all employment, termination or severance Contracts to which Buyer or any of its Subsidiaries is a party (except for offer letters or employment agreements that provide for employment that is terminable at will and without material cost or liability to Buyer or its Subsidiaries), with respect to which Buyer or any Buyer Affiliate has or could reasonably be expected to have any obligation or that are maintained, contributed to or sponsored by Buyer or any of its Subsidiaries for the benefit of any current or former employee, officer or director of Buyer or any of its Subsidiaries and (ii) and any material consulting contracts, arrangements or understandings between Buyer or any Buyer Subsidiary and any natural person consultant of Buyer or any Buyer Subsidiary.

(b) Buyer has made available to Organovo a true and complete copy of each material Buyer Employee Plan and has made available to Organovo a true and complete copy of each material document, if any, prepared in connection with each such Buyer Employee Plan (except for individual written Buyer Option agreements, in which case only forms of such agreements have been made available, unless such individual agreements materially differ from such forms), including as applicable (i) a copy of each trust or other funding arrangement, (ii) the most recent summary plan description and summary of material modifications, (iii) annual reports on IRS Form 5500 for the most recent plan year, (iv) the most recently received IRS determination letter for each such Buyer Employee Plan, and (v) the most recently prepared actuarial report and financial statement in connection with each such Buyer Employee Plan. Neither Buyer nor any Buyer Subsidiary has any express or implied commitment (i) to create, incur liability with respect to or cause to exist any other material employee benefit plan, program or arrangement, (ii) to enter into any Contract to provide compensation or benefits to any individual other than in the Ordinary Course of Business, or (iii) to modify, change or terminate any Buyer Employee Plan, other than with respect to a modification, change or termination required by ERISA, the Code or other applicable law.

(c) No Buyer Employee Plan is, and neither Buyer nor any of its Subsidiaries has any liability or obligation to contribute to, a multiemployer plan (within the meaning of Section 3(37) or 4001(a)(3) of ERISA) (a "***Multiemployer Plan***"), a "multiple employer plan" (within the meaning of Section 413(c) of the Code) (a "***Multiple Employer Plan***"), a "multiple employer welfare arrangement" (within the meaning of Section 3(40) of ERISA) or, except as set forth on Part 2.13(c) of the Buyer Disclosure Schedule, a plan that is subject to Title IV of ERISA or Section 412 of the Code or Section 302 of ERISA.

(d) Except as set forth in Part 2.13(d) of the Buyer Disclosure Schedule, none of the Buyer Employee Plans (i) provides for the payment of separation, severance, termination or similar-type benefits to any person, (ii) obligates Buyer or any Buyer Subsidiary to pay separation, severance, termination or similar-type benefits solely or partially as a result of the Contemplated Transactions, or (iii) obligates Buyer or any Buyer Subsidiary to make any payment or provide any benefit in connection with a "change in ownership or effective control", within the meaning of such term under Section 280G of the Code, or in connection with an event directly or indirectly related to such a change. None of the Buyer Employee Plans provides for or promises retiree medical, disability or life insurance benefits to any current or former employee, officer or director of Buyer or any Buyer Subsidiary, except as required by Section 4980B of the Code, Part 6 of Title I of ERISA or similar applicable law. Except as provided in this Agreement or as set forth in Part 2.13(d) of the Buyer Disclosure Schedule, the execution of this Agreement and the consummation of the Contemplated Transactions (alone or together with any other event which, standing alone, would not by itself trigger such entitlement or acceleration) will not (i) entitle any person to any payment, forgiveness of indebtedness, vesting, distribution, or increase in benefits under or with respect to any Buyer Employee Plan, (ii) otherwise trigger any acceleration (of vesting or payment of benefits or otherwise) under or with respect to any Buyer Employee Plan, (iii) trigger any obligation to fund any Buyer Employee Plan, (iv) limit the right to merge, amend or terminate any Buyer Employee Plan or (v) result in the receipt or retention by any person who is a "disqualified individual" (within the meaning of Code Section 280G) with respect to Buyer and its Subsidiaries of any payment or benefit that is or could be characterized as a "parachute payment" (within the meaning of Section 280G of the Code), determined without regard to the application of Section 280G(b)(5) of the Code. No current or former director, employee, or consultant of Buyer is entitled to receive a gross-up payment from Buyer with respect to any taxes that may be imposed upon such individual pursuant to Section 409A of the Code, Section 4999 of the Code, or otherwise.

(e) Each Buyer Employee Plan has been operated in all material respects in accordance with its terms and the requirements of all applicable Laws including ERISA and the Code. Buyer and Buyer's Subsidiaries have performed all material obligations required to be performed by them under and are not in material default under or in material violation of, and, to the knowledge of Buyer, there is no material default or material violation by any party to, any Buyer Employee Plan. No Legal Proceeding is pending or, to the knowledge of Buyer, threatened with respect to any Buyer Employee Plan (other than routine claims for benefits in the Ordinary Course of Business).

(f) Each Buyer Employee Plan that is intended to be qualified under Section 401(a) of the Code has received a favorable determination, notification or advisory letter with respect to such qualification, or may rely upon an opinion letter for a prototype plan.

(g) There has not been any prohibited transaction (within the meaning of Section 406 of ERISA or Section 4975 of the Code and not otherwise exempt under Section 408 of ERISA) with respect to any Buyer Employee Plan that would reasonably be expected to result in liability to Buyer or any of its Subsidiaries. All contributions, premiums or payments required to be made with respect to any Buyer Employee Plan have been made on or before their due dates, except as would not result in material liability to Buyer or its Subsidiaries.

(h) Each Buyer Employee Plan that is a "nonqualified deferred compensation plan" (as defined for purposes of Section 409A(d)(1) of the Code) subject to Section 409A of the Code has complied at all times with Section 409A of the Code with respect to its form and operation unless otherwise exempt. No Buyer Option (whether currently outstanding or previously exercised) is, has been or would be, as applicable, subject to any tax, penalty or interest under Section 409A of the Code.

2.14 Labor and Employment.

(a) Buyer and its Subsidiaries are in compliance in all material respects with all applicable Laws relating to the employment of labor, including those related to wages, hours, collective bargaining, equal

employment opportunity, occupational health and safety, immigration, individual and collective consultation, notice of termination, and redundancy, and are not liable for any arrears of wages, taxes, penalties or other sums for failure to comply with any of the foregoing. There is no charge or other action pending or, to the knowledge of Buyer, threatened before the U.S. Equal Employment Opportunity Commission (the "***EEOC***"), any court, or any other Governmental Authority of competent jurisdiction with respect to the employment practices of Buyer or any Buyer Subsidiary, except as described on Part 2.14(a) of the Buyer Disclosure Schedule. Neither Buyer nor any Buyer Subsidiary is a party to, or otherwise bound by, any consent decree with, or citation by, the EEOC or any other Governmental Authority of competent jurisdiction relating to employees or employment practices. Neither Buyer nor any Buyer Subsidiary has received any notice of intent by the EEOC or any other Governmental Authority of competent jurisdiction responsible for the enforcement of labor or employment Laws to conduct an investigation or inquiry relating to Buyer or any Buyer Subsidiary, and to the knowledge of Buyer, no such investigation or inquiry is in progress. The employment of all employees of Buyer and its Subsidiaries is terminable at will without cost or liability to Buyer or its Subsidiaries, except for amounts earned prior to the time of termination and except as set forth on Part 2.14(a) of the Buyer Disclosure Schedule.

(b) Buyer has made available to Organovo a list of each employee and consultant that provides services to Buyer or any Buyer Subsidiary and the location in which each such employee and consultant is based and primarily performs his or her duties or services. No Key Employee has advised Buyer or any Buyer Subsidiary in writing of his or her intention to terminate his or her relationship as an employee of Buyer or such Subsidiary for any reason, including because of the consummation of the Contemplated Transactions and, except as set forth on Part 2.14(b) of the Buyer Disclosure Schedule, Buyer and the Subsidiary have no plans or intentions to terminate any such Key Employee. Part 2.14(b) of the Buyer Disclosure Schedule sets forth a complete and accurate list of all offers of employment that are outstanding to any person from Buyer or any Buyer Subsidiary.

(c) To the knowledge of Buyer, no employee, officer or director of Buyer or any Buyer Subsidiary is a party to, or is otherwise bound by, any Contract with a former employer, including any confidentiality, non-competition or proprietary rights agreement, that affects (i) the performance of his or her duties as an employee, officer or director of Buyer or the Buyer Subsidiary, or (ii) the ability of Buyer or any Buyer Subsidiary to conduct its business, in each case in any manner that would have a Buyer Material Adverse Effect. To the knowledge of Buyer, no employee, officer or director of Buyer is in violation, in any material respect, of any term of any employment agreement, nondisclosure agreement, common law nondisclosure obligation, fiduciary duty, non-competition agreement or restrictive covenant to a former employer, which violation would have a Buyer Material Adverse Effect.

(d) There are no material controversies pending or, to the knowledge of Buyer, threatened between Buyer or any Buyer Subsidiary and any of their respective present or former employees or independent contractors.

(e) Neither Buyer nor any Buyer Subsidiary is a party to any collective bargaining agreement, work council agreement, work force agreement or any other labor union Contract applicable to persons employed by Buyer or any Buyer Subsidiary; to the knowledge of Buyer, none of the employees or independent contractors of Buyer or any Buyer Subsidiary is represented by any union, works council, or any other labor organization; and, to the knowledge of Buyer, there are no activities or proceedings of any labor union to organize any such employees or independent contractors.

(f) There are no grievances filed pursuant to any collective bargaining agreement, work council agreement or other labor contract currently pending against Buyer or any Buyer Subsidiary. There are no unfair labor practice complaints pending, or, to the knowledge of Buyer, threatened, against Buyer or any Buyer Subsidiary before the National Labor Relations Board or any court, tribunal or other Governmental Authority of competent jurisdiction, or any current union representation questions involving employees of Buyer or any Buyer Subsidiary. There is no strike, slowdown, work stoppage or lockout, or, to the knowledge of Buyer, threat thereof, by or with respect to any employees of Buyer or any Buyer Subsidiary.

(g) Except as would not result in material liability to Buyer, all individuals who are or were performing consulting or other services for Buyer or any Buyer Subsidiary have been correctly classified by Buyer or the Buyer Subsidiary in all material respects as either "independent contractors" or "employees" as the case may be. Except as would not result in material liability to Buyer or its Subsidiaries, all individuals who are or were performing services for Buyer or any Buyer Subsidiary have been correctly classified by Buyer or the Buyer Subsidiary in all material respects as "exempt" from all applicable wage and hour Laws, including but not limited to Laws governing minimum wage, overtime compensation, meal periods and rest breaks.

2.15 Environmental Matters. Except as would not reasonably be expected to have a Buyer Material Adverse Effect, Buyer and each Buyer Subsidiary is in compliance in all material respects with all applicable Environmental Laws, which compliance includes the possession by Buyer of all permits and other Governmental Authorizations required under applicable Environmental Laws and compliance with the terms and conditions thereof. Neither Buyer nor any Buyer Subsidiary has received since January 1, 2017 any written notice or other communication (in writing or otherwise), whether from a Governmental Body or employee, that alleges that Buyer or any Buyer Subsidiary is not in compliance with any Environmental Law, and, to the Knowledge of Buyer, there are no circumstances that may prevent or interfere with Buyer's or any of its Subsidiaries' compliance with any Environmental Law in the future. To the Knowledge of Buyer: (i) no current or prior owner of any property currently or then leased or controlled by Buyer or any of its Subsidiaries has received since January 1, 2017 any written notice or other communication relating to property owned or leased by Buyer or any of its Subsidiaries, whether from a Governmental Body or employee, that alleges that such current or prior owner or Buyer or any of its Subsidiaries is not in compliance with or has violated any Environmental Law relating to such property and (ii) neither Buyer nor any of its Subsidiaries has any material liability under any Environmental Law that would reasonably be expected to have a Buyer Material Adverse Effect.

2.16 Insurance.

(a) Buyer has delivered to Organovo accurate and complete copies of all material insurance policies and all material self-insurance programs and arrangements relating to the business, assets, liabilities and operations of Buyer and each Buyer Subsidiary. Each of such insurance policies is in full force and effect and Buyer and each Buyer Subsidiary are in material compliance with the terms thereof. Other than customary end of policy notifications from insurance carriers, since January 1, 2017, neither Buyer nor any Buyer Subsidiary has received any notice or other communication regarding any actual or possible: (i) cancellation or invalidation of any insurance policy; (ii) refusal or denial of any coverage, reservation of rights or rejection of any material claim under any insurance policy; or (iii) material adjustment in the amount of the premiums payable with respect to any insurance policy. To the Knowledge of Buyer, there is no pending workers' compensation or other claim under or based upon any insurance policy of Buyer or any Buyer Subsidiary. All information provided to insurance carriers (in applications and otherwise) on behalf of Buyer and each Buyer Subsidiary is accurate and complete, except as would not reasonably be expected to have a Buyer Material Adverse Effect. Buyer and each Buyer Subsidiary have provided timely written notice to the appropriate insurance carrier(s) of each Legal Proceeding pending or threatened in writing against Buyer or any Buyer Subsidiary, and no such carrier has issued a denial of coverage or a reservation of rights with respect to any such Legal Proceeding, or, to the Knowledge of Buyer, informed Buyer or any Buyer Subsidiary of its intent to do so.

(b) Buyer has delivered to Organovo accurate and complete copies of the existing policies (primary and excess) of directors' and officers' liability insurance maintained by Buyer and each Buyer Subsidiary as of the date of this Agreement (the "***Existing Buyer D&O Policies***"). Part 2.16(b) of the Buyer Disclosure Schedule accurately sets forth the most recent annual premiums paid by Buyer and each Buyer Subsidiary with respect to the Existing Buyer D&O Policies.

2.17 Legal Proceedings; Orders.

(a) Except as set forth in Part 2.17 of the Buyer Disclosure Schedule, there is no pending Legal Proceeding, and, to the Knowledge of Buyer, no Person has threatened in writing to commence any Legal

Proceeding: (i) that involves Buyer or any of its Subsidiaries, any Buyer Associate (in his or her capacity as such) or any of the material assets owned or used by Buyer or its Subsidiaries; or (ii) that challenges, or that may have the effect of preventing, delaying, making illegal or otherwise interfering with, the Contemplated Transactions. To the Knowledge of Buyer, no event has occurred, and no claim, dispute or other condition or circumstance exists, that will give rise to or serve as the basis for the commencement of any meritorious Legal Proceeding.

(b) There is no order, writ, injunction, judgment or decree to which Buyer or any Buyer Subsidiary, or any of the material assets owned or used by Buyer or any Buyer Subsidiary, is subject. To the Knowledge of Buyer, no officer or other Key Employee of Buyer or any Buyer Subsidiary is subject to any order, writ, injunction, judgment or decree that prohibits such officer or other employee from engaging in or continuing any conduct, activity or practice relating to the business of Buyer or any Buyer Subsidiary or to any material assets owned or used by Buyer or any Buyer Subsidiary.

2.18 Authority; Binding Nature of Agreement. Buyer and each Buyer Subsidiary have all necessary corporate power and authority to enter into and to perform its obligations under this Agreement. The Board of Directors of Buyer (at one or more meetings duly called and held) has: (a) determined that the Contemplated Transactions are advisable and fair to and in the best interests of Buyer and its stockholders; (b) duly authorized and approved by all necessary corporate action, the execution, delivery and performance of this Agreement and the transactions contemplated hereby, including the Contemplated Transactions; and (c) recommended the adoption and approval of this Agreement by the holders of Buyer Capital Stock. This Agreement has been duly executed and delivered by Buyer and, assuming the due authorization, execution and delivery by Organovo, constitutes the legal, valid and binding obligation of Buyer, enforceable against Buyer in accordance with its terms, subject to: (i) laws of general application relating to bankruptcy, insolvency and the relief of debtors; and (ii) rules of law governing specific performance, injunctive relief and other equitable remedies. Prior to the execution of the Buyer Stockholder Support Agreements, the Board of Directors of Buyer approved the Buyer Stockholder Support Agreements and the transactions contemplated thereby.

2.19 Vote Required. The affirmative vote of (i) a majority of the shares of the Buyer Preferred Stock and the Buyer Common Stock, voting together as a single class; and (ii) at least a majority of the shares of Series 1 Preferred Stock, in each case, as outstanding on the record date for the Buyer Stockholder Written Consent and entitled to vote thereon (the "***Required Buyer Stockholder Vote***") is the only vote of the holders of any class or series of Buyer Capital Stock necessary to adopt or approve this Agreement and approve the Contemplated Transactions and the matters set forth in **Section 5.2(a)**.

2.20 Non-Contravention; Consents. Subject to obtaining the required Buyer Stockholder Vote and the filing of the Certificate of Merger required by the DGCL, neither (x) the execution, delivery or performance of this Agreement by Buyer, nor (y) the consummation of the Contemplated Transactions, will directly or indirectly (with or without notice or lapse of time):

(a) contravene, conflict with or result in a violation of (i) any of the provisions of the certificate of incorporation, bylaws or other charter or organizational documents of Buyer or (ii) any resolution adopted by the stockholders, the Board of Directors or any committee of the Board of Directors of Buyer;

(b) contravene, conflict with or result in a material violation of, or give any Governmental Body or, to the Knowledge of Buyer, other Person the right to challenge the Contemplated Transactions or to exercise any remedy or obtain any relief under, any Legal Requirement or any order, writ, injunction, judgment or decree to which Buyer or its Subsidiaries, or any of the assets owned or used by Buyer or its Subsidiaries, is subject;

(c) contravene, conflict with or result in a material violation of any of the terms or requirements of, or give any Governmental Body the right to revoke, withdraw, suspend, cancel, terminate or modify, any Governmental Authorization that is held by Buyer or its Subsidiaries or that otherwise relates to the business of Buyer or its Subsidiaries or to any of the material assets owned or used by Buyer or its Subsidiaries;

(d) to the Knowledge of Buyer, contravene, conflict with or result in a violation or breach of, or result in a default under, any provision of any Buyer Contract, or give any Person the right to: (i) declare a default or exercise any remedy under any Buyer Contract; (ii) a rebate, chargeback, penalty or change in delivery schedule under any such Buyer Contract; (iii) accelerate the maturity or performance of any Buyer Contract; or (iv) cancel, terminate or modify any term of any Buyer Contract, except, in the case of any Buyer Material Contract, any non-material breach, default, penalty or modification and, in the case of all other Buyer Contracts, any breach, default, penalty or modification that would not result in a Buyer Material Adverse Effect;

(e) result in the imposition or creation of any Encumbrance upon or with respect to any material asset owned or used by Buyer or its Subsidiaries (except for minor liens that will not, in any case or in the aggregate, materially detract from the value of the assets subject thereto or materially impair the operations of Buyer); or

(f) result in the transfer of any material asset of Buyer or its Subsidiaries to any Person.

Except (i) for any Consent set forth on Part 2.20 of the Buyer Disclosure Schedule under any Buyer Contract, (ii) the filing of the Certificate of Merger with the Secretary of State of the State of Delaware pursuant to the DGCL, and (iii) such consents, waivers, approvals, orders, authorizations, registrations, declarations and filings as may be required under applicable federal and state securities laws, neither Buyer nor any of its Subsidiaries was, is or will be required to make any filing with or give any notice to, or to obtain any Consent from, any Person in connection with (x) the execution, delivery or performance of this Agreement or (y) the consummation of the Contemplated Transactions.

2.21 Bank Accounts. Part 2.21 of the Buyer Disclosure Schedule provides accurate information with respect to each account maintained by or for the benefit of Buyer or any Buyer Subsidiary at any bank or other financial institution, including the name of the bank or financial institution, the account number, the balance as of October 31, 2019 and the names of all individuals authorized to draw on or make withdrawals from such accounts.

2.22 No Financial Advisor. Except as set forth on Part 2.22 of the Buyer Disclosure Schedule, no broker, finder or investment banker is entitled to any brokerage fee, finder's fee, opinion fee, success fee, transaction fee or other fee or commission in connection with the Contemplated Transactions based upon arrangements made by or on behalf of Buyer or any of its Subsidiaries.

2.23 Privacy. Buyer has complied with all Laws and its respective internal privacy policies relating to the use, collection, storage, disclosure and transfer of any personally identifiable information collected by Buyer or by third parties having authorized access to the records of Buyer. The execution, delivery and performance of this Agreement will comply with all Laws relating to privacy and with Buyer's privacy policies. Buyer has not received a written complaint regarding Buyer's collection, use or disclosure of personally identifiable information.

2.24 Disclosure. The information supplied by Buyer and each Buyer Subsidiary for inclusion in the Proxy Statement (including any Buyer Financials) will not, as of the date of the Proxy Statement or as of the date such information is prepared or presented, (i) contain any statement that is inaccurate or misleading with respect to any material facts or (ii) omit to state any material fact necessary in order to make such information, in the light of the circumstances under which such information is provided, not false or misleading.

2.25 No Other Representations or Warranties. Except for the representations and warranties expressly set forth in this Agreement, neither Buyer nor any other Person on behalf of Buyer makes any express or implied representation or warranty with respect to Buyer or with respect to any other information provided to Organovo or Merger Sub in connection with the transactions contemplated hereby.

2.26 Disclaimer of Other Representations and Warranties. Buyer acknowledges and agrees that, except for the representations and warranties expressly set forth in this Agreement (a) each of Organovo and Merger Sub is not making and has not made any representations or warranties relating to itself or its business or otherwise in connection with the transactions contemplated by this Agreement, including the Merger, and none of Buyer or its Representatives is relying on any representation or warranty of Organovo or Merger Sub except for those expressly set forth in this Agreement, (b) no Person has been authorized by Organovo or Merger Sub to make any representation or warranty relating to Organovo or Merger Sub or their respective businesses, and if made, such representation or warranty must not be relied upon by Buyer as having been authorized by Organovo or Merger Sub and (c) any estimates, projections, predictions, data, financial information, memoranda, presentations or any other materials or information provided or addressed to Buyer or any of its representatives are not and shall not be deemed to be or include representations or warranties unless any such materials or information are the subject of any express representation or warranty set forth in this Agreement.

ARTICLE 3

REPRESENTATIONS AND WARRANTIES OF ORGANOVO AND MERGER SUB

Organovo and Merger Sub represent and warrant to Buyer as follows, except as set forth in (a) the written disclosure schedule delivered by Organovo to Buyer (the "***Organovo Disclosure Schedule***") or (b) the Organovo SEC Documents (other than any disclosures contained or referenced therein under the captions "Risk Factors" or "Forward Looking Statements" (to the extent such disclosures are general and cautionary, predictive or forward-looking in nature)) filed with or furnished to the SEC by the Company on or after January 1, 2018 and publicly available on or before the day that is one (1) Business Day prior to the date of this Agreement. The Organovo Disclosure Schedule shall be arranged in sections and subsections corresponding to the numbered and lettered sections and subsections contained in this **Article 3**. The disclosures in any section or subsection of the Organovo Disclosure Schedule shall qualify other sections and subsections in this **Article 3** to the extent it is reasonably clear from a reading of the disclosure that such disclosure is applicable to such other sections and subsections. The inclusion of any information in the Organovo Disclosure Schedule (or any update thereto) shall not be deemed to be an admission or acknowledgment, in and of itself, that such information is required by the terms hereof to be disclosed, is material, has resulted in or would result in an Organovo Material Adverse Effect, or is outside the Ordinary Course of Business.

3.1 Subsidiaries; Due Organization; Etc.

(a) Other than Merger Sub, Organovo has no Subsidiaries, except for the Entities identified in Part 3.1(a) of the Organovo Disclosure Schedule; and neither Organovo nor any of the other Entities identified in Part 3.1(a) of the Organovo Disclosure Schedule own any capital stock of, or any equity interest of any nature in, any other Entity, other than the Entities identified in Part 3.1(a) of the Organovo Disclosure Schedule. Organovo has not agreed, nor is obligated to make nor bound by any Contract under which it may become obligated to make, any future investment in or capital contribution to any other Entity. Organovo has not been, at any time, a general partner of, or otherwise been liable for any of the debts or other obligations of, any general partnership, limited partnership or other Entity.

(b) Each of Organovo and the Organovo Subsidiaries is a corporation duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and has all necessary power and authority: (i) to conduct its business in the manner in which its business is currently being conducted; (ii) to own and use its assets in the manner in which its assets are currently owned and used; and (iii) to perform its obligations under all Contracts by which it is bound.

(c) Each of Organovo and the Organovo Subsidiaries is qualified to do business as a foreign corporation, and is in good standing, under the laws of all jurisdictions where the nature of its business requires

such qualification other than in jurisdictions where the failure to be so qualified individually or in the aggregate would not be reasonably expected to have an Organovo Material Adverse Effect.

3.2 Certificate of Incorporation; Bylaws; Charters and Codes of Conduct. Organovo has delivered to Buyer accurate and complete copies of the certificate of incorporation, bylaws and other charter and organizational documents, including all amendments thereto, for Organovo and each Organovo Subsidiary. Neither Organovo nor any Organovo Subsidiary has taken any action in breach or violation in any material respect of any of the material provisions of its certificate of incorporation, bylaws and other charter and organizational documents nor is in breach or violation in any material respect of any of the material provisions of its certificate of incorporation, bylaws and other charter and organizational documents.

3.3 Capitalization, Etc.

(a) The authorized capital stock of Organovo consists of (i) 200,000,000 shares of Organovo Common Stock, par value $0.001 per share, of which 124,015,429 shares were issued and outstanding as of September 30, 2019 (the "***Capitalization Date***"), and (ii) 25,000,000 shares of preferred stock, par value $0.001 per share, of which no shares are issued and outstanding as of the Capitalization Date. Organovo does not hold any shares of its capital stock in its treasury. All of the outstanding shares of Organovo Common Stock have been duly authorized and validly issued, and are fully paid and nonassessable. None of the outstanding shares of Organovo Common Stock is entitled or subject to any preemptive right, right of participation, right of maintenance or any similar right. None of the outstanding shares of Organovo Capital Stock is subject to any right of first refusal in favor of Organovo. Except as contemplated herein and except as identified on Part 3.3(a)(i) of the Organovo Disclosure Schedule, there is no Organovo Contract relating to the voting or registration of, or restricting any Person from purchasing, selling, pledging or otherwise disposing of (or granting any option or similar right with respect to), any shares of Organovo Capital Stock. Organovo is not under any obligation, nor is bound by any Contract pursuant to which it may become obligated, to repurchase, redeem or otherwise acquire any outstanding shares of Organovo Capital Stock or other securities. Part 3.3(a)(ii) of the Organovo Disclosure Schedule accurately and completely describes all repurchase rights held by Organovo with respect to shares of Organovo Capital Stock (including shares issued pursuant to the exercise of stock options) and specifies which of those repurchase rights are currently exercisable.

(b) Except for the Organovo Amended and Restated 2008 Equity Incentive Plan (the "***2008 Plan***"), the Organovo Amended and Restated 2012 Equity Incentive Plan (the "***2012 Plan***") or the Organovo 2016 Employee Stock Purchase Plan (the "***ESPP***"), or except as set forth on Part 3.3(b) of the Organovo Disclosure Schedule, Organovo does not have any stock option plan or any other plan, program, agreement or arrangement providing for any equity-based compensation for any Person. Organovo has reserved 28,553,986 shares of Organovo Common Stock for issuance under the 2012 Plan, 1,500,000 shares of Organovo Common Stock for issuance under the ESPP and no shares of Organovo Common Stock remain available for issuance under the 2008 Plan. Of such reserved shares of Organovo Common Stock, 19,366,418 shares of Organovo Common Stock may be issued upon the exercise of outstanding stock options and the vesting of outstanding restricted stock units as of the Capitalization Date, and 7,991,803 shares remain available for future issuance pursuant to the 2012 Plan and 1,188,718 shares remain available for future purchase pursuant to the ESPP. Part 3.3(b) of the Organovo Disclosure Schedule sets forth the following information with respect to each Organovo Option outstanding as of the date of this Agreement: (A) the name of the optionee; (B) the number of shares of Organovo Common Stock subject to such Organovo Option at the time of grant; (C) the number of shares of Organovo Common Stock subject to such Organovo Option as of the date of this Agreement; (D) the exercise price of such Organovo Option; (E) the date on which such Organovo Option was granted; (F) the applicable vesting schedule, including the number of vested and unvested shares subject to such Organovo Option; (G) the date on which such Organovo Option expires; and (H) whether such Organovo Option is intended to be an "incentive stock option" (as defined in the Code) or a non-qualified stock option. Organovo has made available to Buyer an accurate and complete copy of the 2008 Plan, the 2012 Plan and the ESPP and the forms of all equity awards approved for use thereunder. No vesting of Organovo Options will accelerate in connection with the closing of the Contemplated Transactions.

(c) Except for the outstanding Organovo Options as set forth in **Section 3.3(b)**, for the warrants identified in Organovo's most recent Quarterly Report on Form 10-Q filed with the SEC as of the date hereof (the "***Organovo Warrants***") or as set forth on Part 3.3(c) of the Organovo Disclosure Schedule, there is no: (i) outstanding subscription, option, call, warrant or right (whether or not currently exercisable) to acquire any shares of the capital stock or other securities of Organovo or any of its Subsidiaries; (ii) outstanding security, instrument or obligation that is or may become convertible into or exchangeable for any shares of the capital stock or other securities of Organovo or any of its Subsidiaries; (iii) stockholder rights plan (or similar plan commonly referred to as a "poison pill") or Contract under which Organovo or any of its Subsidiaries is or may become obligated to sell or otherwise issue any shares of its capital stock or any other securities; or (iv) condition or circumstance that may give rise to or provide a basis for the assertion of a claim by any Person to the effect that such Person is entitled to acquire or receive any shares of capital stock or other securities of Organovo or any of its Subsidiaries. There are no outstanding or authorized stock appreciation, phantom stock, profit participation or other similar rights with respect to Organovo or any of its Subsidiaries.

(d) All outstanding shares of Organovo Capital Stock, as well as all options, warrants and other securities of Organovo have been issued and granted in material compliance with (i) all applicable securities laws and other applicable Legal Requirements, and (ii) all requirements set forth in applicable Contracts. Except as identified on Part 3.3(c) of the Organovo Disclosure Schedule, there are no warrants to purchase capital stock of Organovo outstanding on the date of this Agreement.

3.4 SEC Filings; Financial Statements.

(a) Organovo has made available to Buyer accurate and complete copies of all registration statements, proxy statements, Certifications (as defined below) and other statements, reports, schedules, forms and other documents filed by Organovo with the SEC since April 1, 2017 (the "***Organovo SEC Documents***"), other than such documents that can be obtained on the SEC's website at www.sec.gov. Except as set forth on Part 3.4(a) of the Organovo Disclosure Schedule, all material statements, reports, schedules, forms and other documents required to have been filed by Organovo or its officers with the SEC have been so filed on a timely basis. As of the time it was filed with the SEC (or, if amended or superseded by a filing prior to the date of this Agreement, then on the date of such filing), each of the Organovo SEC Documents complied in all material respects with the applicable requirements of the Securities Act or the Exchange Act (as the case may be) and, to Organovo's Knowledge, as of the time they were filed, none of the Organovo SEC Documents contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, except to the extent that the information in such Company SEC Document has been amended or superseded by a later Company SEC Document filed prior to the date hereof. The certifications and statements required by (A) Rule 13a-14 under the Exchange Act and (B) 18 U.S.C. §1350 (Section 906 of the Sarbanes-Oxley Act) relating to the Organovo SEC Documents (collectively, the "***Certifications***") are accurate and complete and comply as to form and content with all applicable Legal Requirements. As used in this **Article 3**, the term "file" and variations thereof shall be broadly construed to include any manner in which a document or information is furnished, supplied or otherwise made available to the SEC.

(b) The financial statements (including any related notes) contained or incorporated by reference in the Organovo SEC Documents: (i) complied as to form in all material respects with the published rules and regulations of the SEC applicable thereto; (ii) were prepared in accordance with GAAP (except as may be indicated in the notes to such financial statements or, in the case of unaudited financial statements, as permitted by Form 10-Q of the SEC, and except that the unaudited financial statements may not contain footnotes and are subject to normal and recurring year-end adjustments that are not reasonably expected to be material in amount) applied on a consistent basis unless otherwise noted therein throughout the periods indicated; and (iii) fairly present in all material respects the consolidated financial position of Organovo as of the respective dates thereof and the results of operations and cash flows of Organovo for the periods covered thereby. Other than as expressly disclosed in the Organovo SEC Documents filed prior to the date hereof, there has been no material change in

Organovo's accounting methods or principles that would be required to be disclosed in Organovo's financial statements in accordance with GAAP. The books of account and other financial records of Organovo and each of its Subsidiaries are true and complete in all material respects.

(c) Organovo's auditor has at all times since the date of enactment of the Sarbanes-Oxley Act been: (i) a registered public accounting firm (as defined in Section 2(a)(12) of the Sarbanes-Oxley Act); (ii) to the knowledge of Organovo, "independent" with respect to Organovo within the meaning of Regulation S-X under the Exchange Act; and (iii) to the knowledge of Organovo, in compliance with subsections (g) through (l) of Section 10A of the Exchange Act and the rules and regulations promulgated by the SEC and the Public Company Accounting Oversight Board thereunder.

(d) Except as set forth in Part 3.4(d) of the Organovo Disclosure Schedule, from April 1, 2017, through the date hereof, Organovo has not received any comment letter from the SEC or the staff thereof or any correspondence from Nasdaq or the staff thereof relating to the delisting or maintenance of listing of the Organovo Common Stock on the Nasdaq Capital Market. Organovo has not disclosed any unresolved comments in its SEC Documents.

(e) Since April 1, 2017, there have been no formal internal investigations regarding financial reporting or accounting policies and practices discussed with, reviewed by or initiated at the direction of the chief executive officer or chief financial officer of Organovo, Organovo's Board of Directors or any committee thereof, other than ordinary course audits or reviews of accounting policies and practices or internal controls required by the Sarbanes-Oxley Act.

(f) Organovo is in compliance in all material respects with the applicable provisions of the Sarbanes-Oxley Act and the applicable listing and governance rules and regulations of the Nasdaq Capital Market.

(g) Organovo maintains a system of internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) that is sufficient to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, including policies and procedures sufficient to provide reasonable assurance (i) that Organovo maintains records that in reasonable detail accurately and fairly reflect Organovo's transactions and dispositions of assets, (ii) that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, (iii) that receipts and expenditures are made only in accordance with authorizations of management and Organovo's Board of Directors, and (iv) regarding prevention or timely detection of the unauthorized acquisition, use or disposition of Organovo's assets that could have a material effect on Organovo's financial statements. Organovo has evaluated the effectiveness of Organovo's internal control over financial reporting and, to the extent required by applicable law, presented in any applicable Organovo SEC Document that is a report on Form 10-K or Form 10-Q (or any amendment thereto) its conclusions about the effectiveness of the internal control over financial reporting as of the end of the period covered by such report or amendment based on such evaluation. Organovo has disclosed to Organovo's auditors and the Audit Committee of Organovo's Board of Directors (and made available to Buyer a summary of the significant aspects of such disclosure) (A) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting that are reasonably likely to adversely affect Organovo's ability to record, process, summarize and report financial information and (B) any fraud, whether or not material, that involves management or other employees who have a significant role in Organovo's internal control over financial reporting. Except as disclosed in the Organovo SEC Documents filed prior to the date hereof, Organovo has not identified any material weaknesses in the design or operation of Organovo's internal control over financial reporting. Since March 31, 2018, there have been no material changes in Organovo's internal control over financial reporting.

(h) Organovo's "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) are reasonably designed to ensure that all information (both financial and

non-financial) required to be disclosed by Organovo in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, and that all such information is accumulated and communicated to Organovo's management as appropriate to allow timely decisions regarding required disclosure and to make the Certifications.

(i) Since April 1, 2017, (i) Organovo has not received or otherwise had or obtained knowledge of any material complaint, allegation, assertion or claim, whether written or oral, regarding the accounting or auditing practices, procedures, methodologies or methods of Organovo's internal accounting controls relating to periods after April 1, 2017, including any material complaint, allegation, assertion or claim that Organovo has engaged in questionable accounting or auditing practices (except for any of the foregoing after the date of this Agreement which have no reasonable basis), and (ii) no attorney representing Organovo, whether or not employed by Organovo, has reported evidence of a material violation of securities Laws, breach of fiduciary duty or similar violation, relating to periods after April 1, 2017, by Organovo or agents to Organovo's Board of Directors or any committee thereof or, to the Knowledge of Organovo, to any director or officer of Organovo.

3.5 Absence of Changes. Except as set forth on Part 3.5 of the Organovo Disclosure Schedule, between March 31, 2019 and the date of this Agreement and except as otherwise expressly contemplated by this Agreement:

(a) there has not been any Organovo Material Adverse Effect or an event or development that would, individually or in the aggregate, reasonably be expected to have an Organovo Material Adverse Effect;

(b) there has not been any material loss, damage or destruction to, or any material interruption in the use of, any of the material assets or business of Organovo (whether or not covered by insurance);

(c) Organovo has not: (i) declared, accrued, set aside or paid any dividend or made any other distribution in respect of any shares of capital stock; or (ii) repurchased, redeemed or otherwise reacquired any shares of capital stock or other securities, except for the repurchase or reacquisition of shares pursuant to Organovo's rights arising upon an individual's termination as an employee, director or consultant;

(d) other than pursuant to Organovo's at-the-market facility and the ordinary course issuance of employee equity grants in the ordinary course pursuant to the 2012 Plan, Organovo has not sold, issued or granted, or authorized the issuance of: (i) any capital stock or other security (except for Organovo Common Stock issued upon the valid exercise of outstanding Organovo Options, Organovo Warrants or the vesting of restricted stock units); (ii) any option, warrant or right to acquire any capital stock or any other security (except for Organovo Options identified in Part 3.3(b) of the Organovo Disclosure Schedule and the Organovo Warrants identified in Part 3.3(c)); or (iii) any instrument convertible into or exchangeable for any capital stock or other security (except for Organovo Options identified in Part 3.3(b) of the Organovo Disclosure Schedule and the Organovo Warrants identified in Part 3.3(c));

(e) there has been no amendment to the certificate of incorporation, bylaws or other charter or organizational documents of Organovo or any Organovo Subsidiary, and neither Organovo nor any Organovo Subsidiary has effected or been a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction;

(f) Organovo has not amended or waived any of its rights under, or exercised its discretion to permit the acceleration of vesting under any provision of: (i) the 2008 Plan, the 2012 Plan or the ESPP; (ii) any Organovo Option or any Contract evidencing or relating to any Organovo Option; (iii) any restricted stock purchase agreement; or (iv) any other Contract evidencing or relating to any equity award (whether payable in cash or stock);

(g) Neither Organovo nor any Organovo Subsidiary has formed any Subsidiary (other than Merger Sub) or acquired any equity interest or other interest in any other Entity;

(h) Neither Organovo nor any Organovo Subsidiary has: (i) lent money to any Person; (ii) incurred or guaranteed any indebtedness; (iii) issued or sold any debt securities or options, warrants, calls or other rights to acquire any debt securities; (iv) guaranteed any debt securities of others; or (v) made any capital expenditure or commitment in excess $50,000;

(i) Neither Organovo nor any Organovo Subsidiary has changed any of its accounting methods, principles or practices in a material respect;

(j) Neither Organovo nor any Organovo Subsidiary has made, changed or revoked any material Tax election, filed any material amendment to any Tax Return, adopted or changed any accounting method in respect of Taxes, changed any annual Tax accounting period, entered into any Tax allocation agreement, Tax sharing agreement or Tax indemnity agreement other than commercial Contracts entered into in the Ordinary Course of Business the principal subject of which is not Taxes , entered into any closing agreement with respect to any Tax, settled or compromised any claim, notice, audit report or assessment in respect of material Taxes, applied for or entered into any ruling from any Tax authority with respect to Taxes, surrendered any right to claim a material Tax refund, or consented to any extension or waiver of the statute of limitations period applicable to any material Tax claim or assessment;

(k) Neither Organovo nor any Organovo Subsidiary has commenced or settled any Legal Proceeding;

(l) Neither Organovo nor any Organovo Subsidiary has entered into any Organovo Material Contract outside the Ordinary Course of Business;

(m) Neither Organovo nor any Organovo Subsidiary has acquired any material asset nor sold, leased or otherwise irrevocably disposed of any of its material assets or properties, nor has any Encumbrance been granted with respect to such assets or properties, except for Encumbrances of immaterial assets in the Ordinary Course of Business consistent with past practices;

(n) there has been no entry into, amendment or termination of any Organovo Material Contract;

(o) there has been no (i) material change in pricing or royalties or other payments set or charged by Organovo or any Organovo Subsidiary to its customers or licensees, (ii) agreement by Organovo or any Organovo Subsidiary to change pricing or royalties or other payments set or charged by persons who have licensed Intellectual Property to Organovo or any Organovo Subsidiary, or (iii) material change in pricing or royalties or other payments set or charged by persons who have licensed Intellectual Property to Organovo or any Organovo Subsidiary; and

(p) Neither Organovo nor any Organovo Subsidiary has negotiated, agreed or committed to take any of the actions referred to in clauses "***(c)***" through "***(o)***" above (other than negotiations between the Parties to enter into this Agreement).

3.6 Intellectual Property.

(a) Part 3.6(a) of the Organovo Disclosure Schedule lists: (i) all Organovo Registered Intellectual Property, including the jurisdictions in which each such item of Intellectual Property has been issued or registered, in which any application for such issuance and registration has been filed, or in which any other filing or recordation has been made and (ii) all actions that are required to be taken by Organovo within 60 days of the date hereof with respect to such Organovo-Owned IP Rights in order to avoid prejudice to, impairment or abandonment of such Organovo-Owned IP Rights. Organovo has taken reasonable actions to maintain and protect such Organovo Registered Intellectual Property. As of the date hereof, all registration, maintenance and renewal fees currently due in connection with such Organovo Registered Intellectual Property have been paid and

all documents, recordations and certificates in connection with such Organovo Registered Intellectual Property currently required to be filed have been filed with the relevant patent, copyright, trademark or other authorities in the United States or foreign jurisdictions, as the case may be, for the purposes of prosecuting, maintaining and perfecting such Organovo Registered Intellectual Property and recording Organovo's ownership interests therein.

(b) Organovo and the Organovo Subsidiaries own each item of Organovo-Owned IP Rights, free and clear of any Encumbrances.

(c) To the Knowledge of Organovo, the operation of the business of Organovo and the Organovo Subsidiaries as such business is currently conducted, as has been conducted since January 1, 2016, does not infringe, misappropriate, or violate any Third-Party IP Rights. As of the date hereof Organovo has not received any written notice, which involves a claim of infringement or misappropriation of any Third-Party IP Rights. Notwithstanding anything to the contrary, no provision of this Agreement shall be construed as a representation or warranty of Organovo against the infringement, misappropriation or violation of the Intellectual Property of any third party.

(d) To the Knowledge of Organovo, there is no unauthorized use, unauthorized disclosure, infringement or misappropriation of any Organovo-Owned IP Rights, by any third party. As of the date hereof, Organovo has not instituted any Legal Proceedings for infringement or misappropriation of any Organovo-Owned IP Rights.

(e) Each consultant and employee involved in the creation of any material Organovo-Owned IP Rights for Organovo has executed proprietary information, confidentiality and assignment agreements that, to extent permitted by Law, assign to Organovo and/or an Organovo Subsidiary (or otherwise grant sufficient rights in) all Intellectual Property that are developed by the employees in the course of their employment, and, with respect to consultants, all Intellectual Property that are developed by such consultants in the course of performing services for Organovo or any Organovo Subsidiaries. Organovo has provided to Buyer copies of all such forms currently and historically used by Organovo.

(f) To the Knowledge of Organovo, no (i) government funding or (ii) facilities of a university, college, other educational institution or research center were used in the development of the Organovo-Owned IP Rights. To the Knowledge of Organovo, no current or former employee, consultant or independent contractor of Organovo, who was involved in, or who contributed to, the creation or development of any Organovo-Owned IP Rights, has performed services for any government, university, college or other educational institution or research center during a period of time during which such employee, consultant or independent contractor was also performing services for Organovo.

(g) Neither the execution and delivery or effectiveness of this Agreement nor the performance of Organovo's obligations under this Agreement will cause (a) the forfeiture or termination of, or give rise to a right of forfeiture or termination of any Organovo-Owned IP Right, or (b) additional payment obligations by Organovo in order to use or exploit Organovo-Owned IP Rights to the same extent as Organovo was permitted before the date hereof.

(h) Organovo has taken commercially reasonable steps to protect and preserve the confidentiality of all confidential or non-public information included in the Organovo IP Rights that Organovo intends to retain as confidential ("***Organovo Confidential Information***"). To the Knowledge of Organovo, all use and/or disclosure of Organovo Confidential Information by or to a third party has been pursuant to the terms of a written Contract between Organovo or the Organovo Subsidiaries and such third party.

(i) Notwithstanding anything to the contrary contained herein, the representations and warranties contained in Section 3.6 are the only representations and warranties made by Organovo that address matters relating to Intellectual Property.

3.7 Agreements, Contracts and Commitments. Part 3.7 of the Organovo Disclosure Schedule identifies:

(a) each Organovo Contract relating to any bonus, deferred compensation, severance, incentive compensation, pension, profit-sharing or retirement plans, or any other employee benefit plans or arrangements, other than Organovo Contracts on Organovo's standard form offer letter entered into in the Ordinary Course of Business;

(b) each Organovo Contract relating to the employment of, or the performance of employment-related services by, any Person, including any employee, consultant or independent contractor, not terminable by Organovo or its Subsidiaries on ninety (90) days' notice without liability, except to the extent general principles of wrongful termination law may limit Organovo's, Organovo's Subsidiaries' or such successor's ability to terminate employees at will;

(c) each Organovo Contract relating to any agreement or plan, including any stock option plan, stock appreciation right plan or stock purchase plan, any of the benefits of which will be increased, or the vesting of benefits of which will be accelerated, by the occurrence of the Contemplated Transactions (either alone or in conjunction with any other event, such as termination of employment) or the value of any of the benefits of which will be calculated on the basis of the Contemplated Transactions;

(d) each Organovo Contract relating to any agreement of indemnification or guaranty not entered into in the Ordinary Course of Business other than indemnification agreements between Organovo and any of its officers or directors;

(e) each Organovo Contract relating to any agreement, contract or commitment containing any covenant limiting the freedom of Organovo or its Subsidiaries to engage in any line of business or compete with any Person;

(f) each Organovo Contract relating to any agreement, contract or commitment relating to capital expenditures and involving obligations after the date of this Agreement in excess of $250,000 and not cancelable without penalty;

(g) each Organovo Contract relating to any agreement, contract or commitment currently in force relating to the disposition or acquisition of material assets or any ownership interest in any Entity;

(h) each Organovo Contract relating to any mortgages, indentures, loans, notes or credit agreements, security agreements or other agreements or instruments relating to the borrowing of money or extension of credit in excess of $100,000 or creating any Encumbrances with respect to any assets of Organovo or any Organovo Subsidiary or any loans or debt obligations with officers or directors of Organovo;

(i) all Contracts pursuant to which Organovo grants any Person a license under any Organovo-Owned IP Rights, other than software licensed to customers in the Ordinary Course of Business;

(j) other than "shrink wrap" and similar generally available commercial end-user licenses to software, all Contracts pursuant to which Organovo or an Organovo Subsidiary is licensed to use any Third-Party IP Rights;

(k) each Organovo Contract (i) appointing a third party to distribute any Organovo product, service or technology (identifying any that contain exclusivity provisions); (ii) for a third party to provide services or products with respect to any pre-clinical or clinical development activities of Organovo; (iii) under which Organovo or the Organovo Subsidiaries has continuing obligations to develop or market any product, technology or service, or any agreement pursuant to which Organovo or the Organovo Subsidiaries has

continuing obligations to develop any Intellectual Property that will not be owned, in whole or in part, by Organovo or such Organovo Subsidiary; or (iv) to license any third party to manufacture or produce any Organovo product, service or technology or any Contract to sell, distribute or commercialize any Organovo products or service, except agreements in the Ordinary Course of Business;

(l) each Organovo Contract with any financial advisor, broker, finder, investment banker or other Person, providing advisory services to Organovo in connection with the Contemplated Transactions; or

(m) any other agreement, contract or commitment which is not terminable at will (with no penalty or payment) by Organovo which involves payment or receipt by Organovo or the Organovo Subsidiaries under any such agreement, contract or commitment of $250,000 or more in the aggregate, or obligations after the date of this Agreement in excess of $250,000 in the aggregate. Organovo has delivered or made available to Buyer accurate and complete (except for applicable redactions thereto) copies of all Organovo Material Contracts, including all amendments thereto. There are no Organovo Material Contracts that are not in written form. Except as set forth on Part 3.7 of the Organovo Disclosure Schedule, neither Organovo nor any of the Organovo Subsidiaries nor, to Organovo's Knowledge, as of the date of this Agreement, has any other party to an Organovo Material Contract breached, violated or defaulted under, or received written notice that it has breached, violated or defaulted under, any of the terms or conditions of any of the agreements, contracts or commitments to which Organovo or the Organovo Subsidiaries is a party or by which it is bound of the type described in clauses (a) through (l) above (any such agreement, contract or commitment, an "***Organovo Material Contract***") in such manner as would permit any party to cancel or terminate any Organovo Material Contract, or would permit any other party to seek damages which would reasonably be expected to have an Organovo Material Adverse Effect. The consummation of the Merger shall not (either alone or upon the occurrence of additional acts or events) result in any material payment or payments becoming due from Organovo or any Organovo Subsidiary to any Person under any Organovo Contract.

3.8 Liabilities. As of the date hereof, neither Organovo nor any Organovo Subsidiary has any Liability except for: (a) Liabilities identified as such in the Organovo Unaudited Interim Balance Sheet; (b) normal and recurring current Liabilities that have been incurred by Organovo or its Subsidiaries since the date of the Organovo Unaudited Interim Balance Sheet in the Ordinary Course of Business and which are not in excess of $100,000 in the aggregate; (c) Liabilities for performance in the Ordinary Course of Business of obligations of Organovo or any Organovo Subsidiary under Organovo Contracts, including the reasonably expected performance of such Organovo Contracts in accordance with their terms (which would not include, for example, any instances of breach or indemnification); (d) Liabilities incurred in connection with the Contemplated Transactions; and (e) Liabilities described in Part 3.8 of the Organovo Disclosure Schedule.

3.9 Compliance; Permits; Restrictions.

(a) Organovo and each Organovo Subsidiary are, and since April 1, 2017 have been, in compliance in all material respects with all applicable Legal Requirements. No investigation, claim, suit, proceeding, audit or other action by any Governmental Body or authority is pending or, to the Knowledge of Organovo, threatened in writing against Organovo or any Organovo Subsidiary. There is no agreement, judgment, injunction, order or decree binding upon Organovo or any Organovo Subsidiary which (i) has or would reasonably be expected to have the effect of prohibiting or materially impairing any business practice of Organovo or any Organovo Subsidiary, any acquisition of material property by Organovo or any Organovo Subsidiary or the conduct of business by Organovo or any Organovo Subsidiary as currently conducted, (ii) may have an adverse effect on Organovo's ability to comply with or perform any covenant or obligation under this Agreement or (iii) may have the effect of preventing, delaying, making illegal or otherwise interfering with the Contemplated Transactions.

(b) Except for matters regarding the FDA and except as would not reasonably be expected to have an Organovo Material Adverse Effect, Organovo and the Organovo Subsidiaries hold all Governmental

Authorizations which are material to the operation of the business of Organovo (collectively, the "***Organovo Permits***") as currently conducted. Part 3.9(b) of the Organovo Disclosure Schedule identifies each Organovo Permit. Each of Organovo and each Organovo Subsidiary is in material compliance with the terms of the Organovo Permits, except as would not reasonably be expected to have an Organovo Material Adverse Effect. No action, proceeding, revocation proceeding, amendment procedure, writ, injunction or claim is pending or, to the Knowledge of Organovo, threatened in writing, which seeks to revoke, limit, suspend, or materially modify any Organovo Permit. The rights and benefits of each material Organovo Permit will be available to the Surviving Corporation immediately after the Effective Time on terms substantially identical to those enjoyed by Organovo and the Organovo Subsidiaries as of the date of this Agreement and immediately prior to the Effective Time.

(c) There are no proceedings pending or, to the Knowledge of Organovo, threatened in writing with respect to an alleged material violation by Organovo or any of the Organovo Subsidiaries of the FDCA, FDA regulations adopted thereunder, the Controlled Substance Act or any other similar Legal Requirements promulgated by the FDA or a Drug/Device Regulatory Agency.

(d) Organovo and each of the Organovo Subsidiaries holds all required Governmental Authorizations issuable by any Drug/Device Regulatory Agency necessary for the conduct of the business of Organovo or such Subsidiary as currently conducted, and, as applicable, development, clinical testing and manufacturing as currently conducted of any of its product candidates (the "***Organovo Product Candidates***") (collectively, the "***Organovo Regulatory Permits***"), except as would not reasonably be expected to have an Organovo Material Adverse Effect, and no such Organovo Regulatory Permit has been (i) revoked, withdrawn, suspended, cancelled or terminated or (ii) modified in any materially adverse manner. Organovo and each Organovo Subsidiary is in compliance in all material respects with the Organovo Regulatory Permits and have not received any written notice or other written communication from any Drug/Device Regulatory Agency regarding (A) any material violation of or failure to comply materially with any term or requirement of any Organovo Regulatory Permit or (B) any revocation, withdrawal, suspension, cancellation, termination or material modification of any Organovo Regulatory Permit.

(e) To the Knowledge of Organovo, all clinical, pre-clinical and other studies and tests conducted by or on behalf of, or sponsored by, Organovo or the Organovo Subsidiaries or in which Organovo or its Subsidiaries or their respective current products or product candidates, including the Organovo Product Candidates, have participated were, and if still pending are being, conducted in all material respects in accordance with standard medical and scientific research procedures and in compliance with the applicable regulations of the Drug/Device Regulatory Agencies and other applicable Legal Requirements, including 21 C.F.R. Parts 50, 54, 56, 58 and 312.

(f) Neither Organovo nor any Organovo Subsidiary is not the subject of any pending, or to the Knowledge of Organovo, threatened investigation in respect of its business or products by the FDA pursuant to its "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" Final Policy set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto. To the Knowledge of Organovo or any of the Organovo Subsidiaries, neither Organovo nor the Organovo Subsidiaries has committed any acts, made any statement, or failed to make any statement, in each case in respect of its business or products that would violate FDA's "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" Final Policy, and any amendments thereto. None of Organovo or any of the Organovo Subsidiaries or any of their respective officers, employees or agents has been convicted of any crime or engaged in any conduct that could result in a debarment or exclusion (i) under 21 U.S.C. Section 335a or (ii) any similar applicable Legal Requirement. To the Knowledge of Organovo, no debarment or exclusionary claims, actions, proceedings or investigations in respect of their business or products are pending or threatened against Organovo, any Organovo Subsidiary or any of their respective officers, employees or agents.

3.10 Tax Matters.

(a) All income and other material Tax Returns required to have been filed by Organovo and each Organovo Subsidiary have been timely filed (taking into account any extension of time within which to file) with the applicable Governmental Body. All such Tax Returns were correct and complete in all material respects and have been prepared in material compliance with all applicable Legal Requirements. No claim has ever been made by any Governmental Body in a jurisdiction where Organovo or any Organovo Subsidiary does not file Tax Returns that it is subject to taxation by that jurisdiction.

(b) All material Taxes due and owing by Organovo or any Organovo Subsidiary (whether or not shown on any Tax Return) have been paid. The unpaid Taxes of Organovo and any Organovo Subsidiary have been reserved for on the Organovo Unaudited Interim Balance Sheet in accordance with GAAP. Since the date of the Organovo Unaudited Interim Balance Sheet, neither Organovo nor any Organovo Subsidiary has incurred any Liability for Taxes outside the Ordinary Course of Business or otherwise inconsistent with past custom and practice.

(c) Organovo and each Organovo Subsidiary have withheld and paid all Taxes required to have been withheld and paid in connection with any amounts paid or owing to any employee, independent contractor, creditor, stockholder or other third party.

(d) There are no material Encumbrances for Taxes (other than Taxes not yet due and payable or Taxes that are being contested in good faith and for which adequate reserves have been made on Organovo Unaudited Interim Balance Sheet) upon any of the assets of Organovo or any Organovo Subsidiary.

(e) No material deficiencies for Taxes with respect to Organovo or any Organovo Subsidiary have been claimed, proposed or assessed by any Governmental Body in writing. There are no pending (or, based on written notice, threatened) audits, assessments or other actions for or relating to any liability in respect of Taxes of Organovo or any Organovo Subsidiary. Neither Organovo nor any Organovo Subsidiary has waived any statute of limitations in respect of Taxes, agreed to any extension of time with respect to a Tax assessment or deficiency or for filing any Tax Return, or consented to extend the period in which Tax may be assessed or collected by any Tax authority.

(f) Organovo has never been a United States real property holding corporation within the meaning of Section 897(c)(2) of the Code during the applicable period specified in Section 897(c)(1)(A)(ii) of the Code.

(g) Neither Organovo nor any Organovo Subsidiary is a party to any Tax allocation agreement, Tax sharing agreement, Tax indemnity agreement, or other similar agreement or arrangement, other than customary commercial Contracts entered into in the Ordinary Course of Business the principal subject matter of which is not Taxes.

(h) Neither Organovo nor any Organovo Subsidiary has ever been a member of an affiliated group filing a consolidated, combined or unitary Tax Return (other than a group the common parent of which is Organovo). Neither Organovo nor any Organovo Subsidiary has any Liability for the Taxes of any Person (other than Organovo and any Organovo Subsidiary) under Treasury Regulations section 1.1502-6 (or any similar provision of state, local, or non-U.S. law), as a transferee or successor, by Contract or otherwise (other than customary commercial Contracts entered into in the Ordinary Course of Business the principal subject matter of which is not Taxes).

(i) Neither Organovo nor any Organovo Subsidiary has distributed stock of another Person, or had its stock distributed by another Person, in a transaction that was purported or intended to be governed in whole or in part by Section 355 of the Code or Section 361 of the Code (or any similar provision of state, local, or non-U.S. law).

(j) Neither Organovo nor any Organovo Subsidiary has entered into any transaction identified as a "listed transaction" for purposes of Treasury Regulations section 1.6011-4(b)(2).

(k) Neither Organovo nor any Organovo Subsidiary (i) is a "controlled foreign corporation" as defined in Section 957 of the Code, (ii) is a "passive foreign investment company" within the meaning of Section 1297 of the Code, (iii) has ever been subject to Tax in any country other than its country of incorporation or formation by virtue of having a permanent establishment (within the meaning of an applicable Tax treaty) or other place of business in such other country, or (iv) is or was a "surrogate foreign corporation" within the meaning of Section 7874(a)(2)(B) or is treated as a U.S. corporation under Section 7874(b) of the Code.

(l) Neither Organovo nor any Organovo Subsidiary will be required to include any material item of income in, or exclude any material item of deduction from, taxable income for any Tax period (or portion thereof) ending after the Closing Date as a result of any: (i) change in method of accounting for Tax purposes; (ii) use of an improper method of accounting for a Tax period ending on or prior to the Closing Date; (iii) "closing agreement" as described in Section 7121 of the Code (or any similar provision of state, local or foreign Law) executed on or prior to the Closing Date; (iv) intercompany transaction or excess loss account described in Treasury Regulations under Section 1502 of the Code (or any similar provision of state, local or foreign Law) consummated on or prior to the Closing Date; (v) installment sale or open transaction disposition made on or prior to the Closing Date; (vi) prepaid amount received or deferred revenue accrued on or prior to the Closing Date; or (vii) election under Section 108(i) of the Code (or any similar provision of state, local or foreign Law). Organovo has not made any election under Section 965(h) of the Code.

(m) Neither Organovo nor any Organovo Subsidiary has taken or agreed to take any action, or has any knowledge of any fact or circumstance, that could reasonably be expected to prevent the Merger from qualifying as a "reorganization" within the meaning of Section 368(a) of the Code.

3.11 Employee Benefit Plans.

(a) Part 3.11(a) of the Organovo Disclosure Schedule lists all material Organovo Employee Plans. "***Organovo Employee Plans***" shall mean: (i) all employee benefit plans (as defined in Section 3(3) of ERISA and all bonus, stock option, stock purchase, restricted stock, incentive, deferred compensation, retiree medical or life insurance, supplemental retirement, severance or other material benefit plans, programs or arrangements, and all employment, termination or severance Contracts to which Organovo or any Organovo Affiliate is a party (except for offer letters or employment agreements that provide for employment that is terminable at will and without material cost or liability to Organovo or its Subsidiaries), with respect to which Organovo or any Organovo Affiliate has or could reasonably be expected to have any obligation or that are maintained, contributed to or sponsored by Organovo or any Organovo Affiliate for the benefit of any current or former employee, officer or director of Organovo or any Organovo Affiliate and (ii) any material consulting contracts, arrangements or understandings between Organovo or any Organovo Subsidiary and any natural person consultant of Organovo or any Organovo Subsidiary.

(b) Organovo has made available to Buyer a true and complete copy of each material Organovo Employee Plan and has made available to Buyer a true and complete copy of each material document, if any, prepared in connection with each such Organovo Employee Plan (except for individual written Organovo Option agreements, in which case only forms of such agreements have been made available, unless such individual agreements materially differ from such forms), including as applicable (i) a copy of each trust or other funding arrangement, (ii) the most recent summary plan description and summary of material modifications, (iii) annual reports on IRS Form 5500 for the most recent plan year, (iv) the most recently received IRS determination letter for each such Organovo Employee Plan, and (v) the most recently prepared actuarial report and financial statement in connection with each such Organovo Employee Plan. Neither Organovo nor any Organovo Affiliate has any express or implied commitment (i) to create, incur liability with respect to or cause to exist any other material employee benefit plan, program or arrangement, (ii) to enter into any Contract to provide compensation

or benefits to any individual other than in the Ordinary Course of Business, or (iii) to modify, change or terminate any Organovo Employee Plan, other than with respect to a modification, change or termination required by ERISA, the Code or other applicable law.

(c) No Organovo Employee Plan is, and neither Organovo nor any Organovo Affiliate has any liability or obligation to contribute to, a Multiemployer Plan, a Multiple Employer Plan, a "multiple employer welfare arrangement" (within the meaning of Section 3(40) of ERISA) or, except as set forth on Part 3.11(c) of the Organovo Disclosure Schedule, a plan that is subject to Title IV of ERISA or Section 412 of the Code or Section 302 of ERISA.

(d) Except as set forth in Part 3.11(d) of the Organovo Disclosure Schedule, none of the Organovo Employee Plans (i) provides for the payment of separation, severance, termination or similar-type benefits to any person, (ii) obligates Organovo or any Organovo Subsidiary to pay separation, severance, termination or similar-type benefits solely or partially as a result of the Contemplated Transactions, or (iii) obligates Organovo or any Organovo Subsidiary to make any payment or provide any benefit in connection with a "change in ownership or effective control", within the meaning of such term under Section 280G of the Code, or in connection with an event directly or indirectly related to such a change. None of the Organovo Employee Plans provides for or promises retiree medical, disability or life insurance benefits to any current or former employee, officer or director of Organovo or any Organovo Subsidiary, except as required by Section 4980B of the Code, Part 6 of Title I of ERISA or similar applicable law. Except as provided in this Agreement or as set forth in Part 3.11(d) of the Organovo Disclosure Schedule, the execution of this Agreement and the consummation of the Contemplated Transactions (alone or together with any other event which, standing alone, would not by itself trigger such entitlement or acceleration) will not (i) entitle any person to any payment, forgiveness of indebtedness, vesting, distribution, or increase in benefits under or with respect to any Organovo Employee Plan, (ii) otherwise trigger any acceleration (of vesting or payment of benefits or otherwise) under or with respect to any Organovo Employee Plan, (iii) trigger any obligation to fund any Organovo Employee Plan (iv) limit the right to merge, amend or terminate any Organovo Employee Plan or (v) result in the receipt or retention by any person who is a "disqualified individual" (within the meaning of Code Section 280G) with respect to Organovo and any Organovo Affiliates of any payment or benefit that is or could be characterized as a "parachute payment" (within the meaning of Section 280G of the Code), determined without regard to the application of Section 280G(b)(5) of the Code. No current or former director, employee, or consultant of Organovo is entitled to receive a gross-up payment from Organovo with respect to any taxes that may be imposed upon such individual pursuant to Section 409A of the Code, Section 4999 of the Code, or otherwise.

(e) Each Organovo Employee Plan has been operated in all material respects in accordance with its terms and the requirements of all applicable Laws including ERISA and the Code. Organovo and Organovo's Subsidiaries have performed all material obligations required to be performed by them under and are not in material default under or in material violation of, and, to the knowledge of Organovo, there is no material default or material violation by any party to, any Organovo Employee Plan. No Legal Proceeding is pending or, to the knowledge of Organovo, threatened with respect to any Organovo Employee Plan (other than routine claims for benefits in the Ordinary Course of Business).

(f) Each Organovo Employee Plan that is intended to be qualified under Section 401(a) of the Code has received a favorable determination, notification or advisory letter with respect to such qualification, or may rely upon an opinion letter for a prototype plan.

(g) There has not been any prohibited transaction (within the meaning of Section 406 of ERISA or Section 4975 of the Code and not otherwise exempt under Section 408 of ERISA) with respect to any Organovo Employee Plan that would reasonably be expected to result in liability to Organovo or any Organovo Affiliate. All contributions, premiums or payments required to be made with respect to any Organovo Employee Plan have been made on or before their due dates, except as would not result in material liability to Organovo or its Subsidiaries.

(h) Each Organovo Employee Plan that is a "nonqualified deferred compensation plan" (as defined for purposes of Section 409A(d)(1) of the Code) subject to Section 409A of the Code has complied at all times with Section 409A of the Code with respect to its form and operation unless otherwise exempt. No Organovo Option (whether currently outstanding or previously exercised) is, has been or would be, as applicable, subject to any tax, penalty or interest under Section 409A of the Code.

3.12 Labor and Employment.

(a) Organovo and the Organovo Subsidiaries are in compliance in all material respects with all applicable Laws relating to the employment of labor, including those related to wages, hours, collective bargaining, equal employment opportunity, occupational health and safety, immigration, individual and collective consultation, notice of termination, and redundancy, and are not liable for any arrears of wages, taxes, penalties or other sums for failure to comply with any of the foregoing. There is no charge or other Action pending or, to the knowledge of Organovo, threatened before the EEOC, any court, or any other Governmental Authority of competent jurisdiction with respect to the employment practices of Organovo or any Organovo Subsidiary, except as described on Part 3.12(a) of the Organovo Disclosure Schedule. Neither Organovo nor any Organovo Subsidiary is a party to, or otherwise bound by, any consent decree with, or citation by, the EEOC or any other Governmental Authority of competent jurisdiction relating to employees or employment practices. Neither Organovo nor any Organovo Subsidiary has received any notice of intent by the EEOC or any other Governmental Authority of competent jurisdiction responsible for the enforcement of labor or employment Laws to conduct an investigation or inquiry relating to Organovo or any Organovo Subsidiary, and to the knowledge of Organovo, no such investigation or inquiry is in progress. The employment of all employees of Organovo and the Organovo Subsidiaries is terminable at will without cost or liability to Organovo or its Subsidiaries, except for amounts earned prior to the time of termination and except as set forth on Part 3.12(a) of the Organovo Disclosure Schedule).

(b) Organovo has made available to Buyer a list of each employee and consultant that provides services to Organovo or any Organovo Subsidiary and the location in which each such employee and consultant is based and primarily performs his or her duties or services. No Key Employee has advised Organovo or any Organovo Subsidiary in writing of his or her intention to terminate his or her relationship as an employee of Organovo or such Subsidiary for any reason, including because of the consummation of the Contemplated Transactions and, except as set forth on Part 3.12(b) of the Organovo Disclosure Schedule, Organovo and the Subsidiary have no plans or intentions to terminate any such Key Employee. Part 3.12(b) of the Organovo Disclosure Schedule sets forth a complete and accurate list of all offers of employment that are outstanding to any person from Organovo or any Organovo Subsidiary.

(c) To the knowledge of Organovo, no employee, officer or director of Organovo or any Organovo Subsidiary is a party to, or is otherwise bound by, any Contract with a former employer, including any confidentiality, non-competition or proprietary rights agreement, that affects (i) the performance of his or her duties as an employee, officer or director of Organovo or the Organovo Subsidiary, or (ii) the ability of Organovo or any Organovo Subsidiary to conduct its business, in each case in any manner that would have a Organovo Material Adverse Effect. To the knowledge of Organovo, no employee, officer or director of Organovo is in violation, in any material respect, of any term of any employment agreement, nondisclosure agreement, common law nondisclosure obligation, fiduciary duty, non-competition agreement or restrictive covenant to a former employer, which violation would have an Organovo Material Adverse Effect.

(d) There are no material controversies pending or, to the knowledge of Organovo, threatened between Organovo or any Organovo Subsidiary and any of their respective present or former employees or independent contractors.

(e) Neither Organovo nor any Organovo Subsidiary is a party to any collective bargaining agreement, work council agreement, work force agreement or any other labor union Contract applicable to

persons employed by Organovo or any Organovo Subsidiary; to the knowledge of Organovo, none of the employees or independent contractors of Organovo or any Organovo Subsidiary is represented by any union, works council, or any other labor organization; and, to the knowledge of Organovo, there are no activities or proceedings of any labor union to organize any such employees or independent contractors.

(f) There are no grievances filed pursuant to any collective bargaining agreement, work council agreement or other labor contract currently pending against Organovo or any Organovo Subsidiary. There are no unfair labor practice complaints pending, or, to the knowledge of Organovo, threatened, against Organovo or any Organovo Subsidiary before the National Labor Relations Board or any court, tribunal or other Governmental Authority of competent jurisdiction, or any current union representation questions involving employees of Organovo or any Organovo Subsidiary. There is no strike, slowdown, work stoppage or lockout, or, to the knowledge of Organovo, threat thereof, by or with respect to any employees of Organovo or any Organovo Subsidiary.

(g) Except as would not result in material liability to Organovo, all individuals who are or were performing consulting or other services for Organovo or any Organovo Subsidiary have been correctly classified by Organovo or the Organovo Subsidiary in all material respects as either “independent contractors” or “employees” as the case may be. Except as would not result in material liability to Organovo or its Subsidiaries, all individuals who are or were performing services for Organovo or any Organovo Subsidiary have been correctly classified by Organovo or the Organovo Subsidiary in all material respects as “exempt” from all applicable wage and hour Laws, including but not limited to Laws governing minimum wage, overtime compensation, meal periods and rest breaks.

3.13 Environmental Matters. Except as would not reasonably be expected to have an Organovo Material Adverse Effect, Organovo and each Organovo Subsidiary is in compliance with all applicable Environmental Laws, which compliance includes the possession by Organovo of all permits and other Governmental Authorizations required under applicable Environmental Laws and compliance with the terms and conditions thereof. Neither Organovo nor any Organovo Subsidiary has received since April 1, 2017 any written notice or other communication (in writing or otherwise), whether from a Governmental Body or employee, that alleges that Organovo or any Organovo Subsidiary is not in compliance with any Environmental Law, and, to the Knowledge of Organovo, there are no circumstances that may prevent or interfere with Organovo’s or any Organovo Subsidiary’s compliance with any Environmental Law in the future. To the Knowledge of Organovo: (i) no current or prior owner of any property currently or then leased or controlled by Organovo or any Organovo Subsidiaries has received since April 1, 2017 any written notice or other communication relating to property owned or leased by Organovo or any of its Subsidiaries, whether from a Governmental Body or employee, that alleges that such current or prior owner or Organovo or any of the Organovo Subsidiaries is not in compliance with or violated any Environmental Law relating to such property and (ii) neither Organovo nor any of its Subsidiaries has any material liability under any Environmental Law that would reasonably be expected to have an Organovo Material Adverse Effect.

3.14 Insurance.

(a) Organovo has delivered to Buyer accurate and complete copies of all material insurance policies and all material self-insurance programs and arrangements relating to the business, assets, liabilities and operations of Organovo and each Organovo Subsidiary. Each of such insurance policies is in full force and effect and Organovo and each Organovo Subsidiary is in material compliance with the terms thereof. Other than customary end of policy notifications from insurance carriers, since April 1, 2017, neither Organovo nor any Organovo subsidiary has received any notice or other communication regarding any actual or possible: (i) cancellation or invalidation of any insurance policy; (ii) refusal or denial of any coverage, reservation of rights or rejection of any material claim under any insurance policy; or (iii) material adjustment in the amount of the premiums payable with respect to any insurance policy. To the Knowledge of Organovo, there is no pending workers’ compensation or other claim under or based upon any insurance policy of Organovo or any Organovo

Subsidiary. All information provided to insurance carriers (in applications and otherwise) on behalf of Organovo and each Organovo Subsidiary is accurate and complete, except as would not reasonably be expected to have an Organovo Material Adverse Effect. Organovo and each Organovo Subsidiary have provided timely written notice to the appropriate insurance carrier(s) of each Legal Proceeding pending or threatened in writing against Organovo or any Organovo Subsidiary, and no such carrier has issued a denial of coverage or a reservation of rights with respect to any such Legal Proceeding, or, to the Knowledge of Buyer, informed Organovo or any Organovo Subsidiary of its intent to do so.

(b) Organovo has delivered to Buyer accurate and complete copies of the existing policies (primary and excess) of directors' and officers' liability insurance maintained by Organovo and each Organovo Subsidiary as of the date of this Agreement (the "***Existing Organovo D&O Policies***"). Part 3.14(b) of the Organovo Disclosure Schedule accurately sets forth the most recent annual premiums paid by Organovo and each Organovo Subsidiary with respect to the Existing Organovo D&O Policies.

3.15 Legal Proceedings; Orders.

(a) Except as set forth in Part 3.15 of the Organovo Disclosure Schedule, there is no pending Legal Proceeding, and, to the Knowledge of Organovo, no Person has threatened in writing to commence any Legal Proceeding: (i) that involves Organovo, any of its Subsidiaries, any Organovo Associate (in his or her capacity as such) or any of the material assets owned or used by Organovo or its Subsidiaries; or (ii) that challenges, or that may have the effect of preventing, delaying, making illegal or otherwise interfering with, the Contemplated Transactions. To the Knowledge of Organovo, no event has occurred, and no claim, dispute or other condition or circumstance exists, that will, or that would reasonably be expected to, give rise to or serve as a basis for the commencement of any such Legal Proceeding.

(b) There is no order, writ, injunction, judgment or decree to which Organovo or any Organovo Subsidiary, or any of the assets owned or used by Organovo or any Organovo Subsidiary is subject. To the Knowledge of Organovo, no officer or other Key Employee of Organovo is subject to any order, writ, injunction, judgment or decree that prohibits such officer or other employee from engaging in or continuing any conduct, activity or practice relating to the business of Organovo or any Organovo Subsidiary or to any material assets owned or used by Organovo or any Organovo Subsidiary.

3.16 Authority; Binding Nature of Agreement. Each of Organovo and Merger Sub and each Organovo Subsidiary have all necessary corporate power and authority to enter into and to perform its obligations under this Agreement. The Board of Directors of Organovo and Merger Sub (at meetings duly called and held) has: (a) determined that the Contemplated Transactions are advisable and fair to and in the best interests of such Party and its stockholders; (b) duly authorized and approved by all necessary corporate action, the execution, delivery and performance of this Agreement and the transactions contemplated hereby, including the Contemplated Transactions; and (c) recommended the adoption and approval of this Agreement by the holders of Organovo Common Stock and directed that this Agreement, the Reverse Split and the issuance of shares of Organovo Common Stock in the Contemplated Transactions be submitted for consideration by Organovo's stockholders at the Organovo Stockholders' Meeting. This Agreement has been duly executed and delivered by Organovo and Merger Sub and, assuming the due authorization, execution and delivery by Buyer, constitutes the legal, valid and binding obligation of Organovo and Merger Sub (as applicable), enforceable against Organovo or Merger Sub (as applicable) in accordance with its terms, subject to: (i) laws of general application relating to bankruptcy, insolvency and the relief of debtors; and (ii) rules of law governing specific performance, injunctive relief and other equitable remedies. Prior to the execution of the Organovo Stockholder Support Agreements, the Board of Directors of Organovo approved the Organovo Stockholder Support Agreements and the transactions contemplated thereby. Merger Sub was formed solely to facilitate the Merger and has no assets, liabilities or operations except in connection therewith.

3.17 Vote Required. The affirmative vote of (i) the holders of a majority of the shares of Organovo Common Stock having voting power representing a majority of the outstanding Common Stock, and (ii) the

holders of a majority of the votes cast at the Organovo Stockholders' Meeting are the only votes of the holders of any class or series of Organovo's capital stock necessary to approve the Organovo Stockholder Proposals (the "***Required Organovo Stockholder Vote***").

3.18 Non-Contravention; Consents. Subject to obtaining the Required Organovo Stockholder Vote for the Organovo Stockholder Proposals and the filing of the Certificate of Merger required by the DGCL, neither (x) the execution, delivery or performance of this Agreement by Organovo or Merger Sub, nor (y) the consummation of the Contemplated Transactions, will directly or indirectly (with or without notice or lapse of time):

(a) contravene, conflict with or result in a violation of (i) any of the provisions of the certificate of incorporation, bylaws or other charter or organizational documents of Organovo or any of its Subsidiaries, or (ii) any resolution adopted by the stockholders, the Board of Directors or any committee of the Board of Directors of Organovo or any of its Subsidiaries;

(b) contravene, conflict with or result in a violation of, or give any Governmental Body or, to the Knowledge of Organovo, other Person the right to challenge the Contemplated Transactions or to exercise any remedy or obtain any relief under, any Legal Requirement or any order, writ, injunction, judgment or decree to which Organovo or any of its Subsidiaries or any of the assets owned or used by Organovo or any of its Subsidiaries is subject;

(c) contravene, conflict with or result in a violation of any of the terms or requirements of, or give any Governmental Body the right to revoke, withdraw, suspend, cancel, terminate or modify, any Governmental Authorization that is held by Organovo or any of its Subsidiaries or that otherwise relates to the business of Organovo or any of its Subsidiaries or to any of the material assets owned or used by Organovo or any of its Subsidiaries;

(d) to the Knowledge of Organovo, contravene, conflict with or result in a violation or breach of, or result in a default under, any provision of any Organovo Contract, or give any Person the right to: (i) declare a default or exercise any remedy under any Organovo Contract; (ii) a rebate, chargeback, penalty or change in delivery schedule under any such Organovo Contract; (iii) accelerate the maturity or performance of any Organovo Contract; or (iv) cancel, terminate or modify any term of any Organovo Contract; except, in the case of any Organovo Material Contract, any non-material breach, default, penalty or modification and in the case of all other Organovo Contracts, any breach, default, penalty or modification that would not result in an Organovo Material Adverse Effect;

(e) result in the imposition or creation of any Encumbrance upon or with respect to any asset owned or used by Organovo (except for minor liens that will not, in any case or in the aggregate, materially detract from the value of the material assets subject thereto or materially impair the operations of Organovo); or

(f) result in the transfer of any material asset of Organovo or any Organovo Subsidiaries to any Person.

Except (i) for any Consent set forth on Part 3.18 of the Organovo Disclosure Schedule under any Organovo Contract, (ii) the approval of the Organovo Stockholder Proposals and the issuance of shares of Organovo Common Stock, (iii) the filing of the Certificate of Merger with the Secretary of State of the State of Delaware pursuant to the DGCL, (iv) the filing of an amendment to Organovo's certificate of incorporation to effect the Reverse Split and the Corporate Name Change, and (v) such consents, waivers, approvals, orders, authorizations, registrations, declarations and filings as may be required under applicable federal and state securities laws, Organovo was not, is not, nor will be required to make any filing with or give any notice to, or to obtain any Consent from, any Person in connection with (x) the execution, delivery or performance of this Agreement, or (y) the consummation of the Contemplated Transactions.

3.19 Bank Accounts. Part 3.19(a) of the Organovo Disclosure Schedule provides accurate information with respect to each account maintained by or for the benefit of Organovo or any of its Subsidiaries at any bank or other financial institution, including the name of the bank or financial institution, the account number, the balance as of September 30, 2019 and the names of all individuals authorized to draw on or make withdrawals from such accounts.

3.20 No Financial Advisor. Except as set forth on Part 3.20 of the Organovo Disclosure Schedule, no broker, finder or investment banker is entitled to any brokerage fee, finder's fee, opinion fee, success fee, transaction fee or other fee or commission in connection with the Contemplated Transactions based upon arrangements made by or on behalf of Organovo or any of its Subsidiaries.

3.21 Title to Assets. Each of Organovo and the Organovo Subsidiaries owns, and has good and valid title to, or, in the case of leased properties and assets, valid leasehold interests in, all material tangible properties or assets and equipment used or held for use in its business or operations or purported to be owned by it. All such assets are owned by Organovo or an Organovo Subsidiary free and clear of any Encumbrances, except for: (i) any lien for current Taxes not yet due and payable or for Taxes that are being contested in good faith and for which adequate reserves have been made on the Organovo Unaudited Interim Balance Sheet; (ii) minor liens that have arisen in the Ordinary Course of Business and that do not (in any case or in the aggregate) materially detract from the value of the assets subject thereto or materially impair the operations of Organovo or any Organovo Subsidiary; and (iii) liens listed in Part 3.21 of the Organovo Disclosure Schedule.

3.22 Real Property; Leasehold. Neither Organovo nor any Organovo Subsidiary owns any real property or any interest in real property, except for the leaseholds created under the real property leases identified in Part 3.22 of the Organovo Disclosure Schedule, which are in full force and effect and with no existing default thereunder.

3.23 Valid Issuance. The Organovo Common Stock to be issued in the Merger will, when issued in accordance with the provisions of this Agreement be validly issued, fully paid and nonassessable.

3.24 Privacy. Organovo has complied with all Laws and its respective internal privacy policies relating to the use, collection, storage, disclosure and transfer of any personally identifiable information collected by Organovo or by third parties having authorized access to the records of Organovo. The execution, delivery and performance of this Agreement will comply with all Laws relating to privacy and with Organovo's privacy policies. Organovo has not received a written complaint regarding Organovo's collection, use or disclosure of personally identifiable information.

3.25 Disclosure. The information supplied by Organovo and each Organovo Subsidiary for inclusion in the Proxy Statement (including any Buyer Financials) will not, as of the date of the Proxy Statement or as of the date such information is prepared or presented, (i) contain any statement that is inaccurate or misleading with respect to any material facts or (ii) omit to state any material fact necessary in order to make such information, in the light of the circumstances under which such information is provided, not false or misleading.

3.26 No Other Representations or Warranties. Except for the representations and warranties contained in this Agreement, neither Organovo nor any other Person on behalf of Organovo makes any express or implied representation or warranty with respect to Organovo or any of its Subsidiaries or with respect to any other information provided to Buyer in connection with the transactions contemplated hereby.

3.27 Disclaimer of Other Representations and Warranties. Each of Organovo and Merger Sub acknowledges and agrees that, except for the representations and warranties expressly set forth in this Agreement (a) Buyer is not making and has not made any representations or warranties relating to itself or its business or otherwise in connection with the transactions contemplated by this Agreement, including the Merger, and none of Organovo, Merger Sub or their respective Representatives is relying on any representation or warranty of Buyer

except for those expressly set forth in this Agreement, (b) no Person has been authorized by Buyer to make any representation or warranty relating to Buyer or its business, and if made, such representation or warranty must not be relied upon by Organovo or Merger Sub as having been authorized by Buyer and (c) any estimates, projections, predictions, data, financial information, memoranda, presentations or any other materials or information provided or addressed to Organovo, Merger Sub or any of their representatives are not and shall not be deemed to be or include representations or warranties unless any such materials or information are the subject of any express representation or warranty set forth in this Agreement.

ARTICLE 4

CERTAIN COVENANTS OF THE PARTIES

4.1 Access and Investigation. Subject to the terms of the Confidentiality Agreement which the Parties agree will continue in full force following the date of this Agreement, during the period commencing on the date of this Agreement and ending at the Effective Time (the "***Pre-Closing Period***"), upon reasonable notice each Party shall, and shall use commercially reasonable efforts to cause such Party's Representatives to: (a) provide the other Party and such other Party's Representatives with reasonable access during normal business hours to such Party's Representatives, personnel and assets and to all existing books, records, Tax Returns, work papers and other documents and information relating to such Party and its Subsidiaries; (b) provide the other Party and such other Party's Representatives with such copies of the existing books, records, Tax Returns, work papers, product data, and other documents and information relating to such Party and its Subsidiaries, and with such additional financial, operating and other data and information regarding such Party and its Subsidiaries as the other Party may reasonably request; and (c) permit the other Party's officers and other employees to meet, upon reasonable notice and during normal business hours, with the chief financial officer and other officers and managers of such Party responsible for such Party's financial statements and the internal controls of such Party to discuss such matters as the other Party may deem necessary or appropriate in order to enable the other Party to satisfy its obligations under the Sarbanes-Oxley Act and the rules and regulations relating thereto. Without limiting the generality of any of the foregoing, during the Pre-Closing Period, each Party shall promptly make available to the other Party copies of:

(i) the unaudited monthly consolidated balance sheets of such Party as of the end of each calendar month and the related unaudited monthly consolidated statements of operations, statements of stockholders' equity and statements of cash flows for such calendar month, which shall be delivered within thirty (30) days after the end of such calendar month, or such longer periods as the Parties may agree to in writing;

(ii) any written materials or communications sent by or on behalf of a Party to its stockholders;

(iii) any material notice, document or other communication sent by or on behalf of a Party to any party to any Organovo Material Contract or Buyer Material Contract, as applicable, or sent to a Party by any party to any Organovo Material Contract or Buyer Material Contract, as applicable (other than any communication that relates solely to routine commercial transactions between such Party and the other party to any such Organovo Material Contract or Buyer Material Contract, as applicable, and that is of the type sent in the Ordinary Course of Business and consistent with past practices);

(iv) any notice, report or other document filed with or otherwise furnished, submitted or sent to any Governmental Body on behalf of a Party in connection with the Contemplated Transactions;

(v) any non-privileged notice, document or other communication sent by or on behalf of, or sent to, a Party relating to any pending or threatened Legal Proceeding involving or affecting such Party; and

(vi) any material notice, report or other document received by a Party from any Governmental Body.

Notwithstanding the foregoing, any Party may restrict the foregoing access to the extent that any Legal Requirement applicable to such Party requires such Party to restrict or prohibit access to any of such Party's properties or information.

4.2 Operation of Organovo's Business.

(a) Except as set forth on Part 4.2(a) of the Organovo Disclosure Schedule, during the Pre-Closing Period: (i) each of Organovo and the Organovo Subsidiaries shall conduct its business and operations: (A) in the Ordinary Course of Business and in accordance with past practices; and (B) in compliance with all applicable Legal Requirements and the requirements of all Contracts that constitute Organovo Material Contracts; (ii) continue to make regularly scheduled payments on its existing debt when due and payable (and not make any prepayments), if any; (iii) continue to pay outstanding accounts payable and other current Liabilities (including payroll) when due and payable; and (iv) promptly notify Buyer of: (A) any notice or other communication from any Person alleging that the Consent of such Person is or may be required in connection with any of the Contemplated Transactions; (B) any Legal Proceeding against, relating to, involving or otherwise affecting Organovo or any of its Subsidiaries that is commenced, or, to the Knowledge of Organovo, threatened against, Organovo or any of its Subsidiaries after the date of this Agreement; and (C) any notice or other communication from any Person alleging that any payment or other obligation is or will be owed to such Person at any time before or after the date of this Agreement, except for invoices or other communications related to agreements or dealings in the Ordinary Course of Business or payments or obligations identified in this Agreement, including the Organovo Disclosure Schedule.

(b) During the Pre-Closing Period, Organovo shall promptly notify Buyer in writing, by delivery of an updated Organovo Disclosure Schedule, of: (i) the discovery by Organovo of any event, condition, fact or circumstance that occurred or existed on or prior to the date of this Agreement and that caused or constitutes a material inaccuracy in any representation or warranty made by Organovo in this Agreement in a manner that causes the conditions set forth in **Section 8.1** not to be satisfied; (ii) any event, condition, fact or circumstance that occurs, arises or exists after the date of this Agreement and that would cause or constitute a material inaccuracy in any representation or warranty made by Organovo in this Agreement in a manner that causes the conditions set forth in **Section 8.1** not to be satisfied if: (A) such representation or warranty had been made as of the time of the occurrence, existence or discovery of such event, condition, fact or circumstance; or (B) such event, condition, fact or circumstance had occurred, arisen or existed on or prior to the date of this Agreement; (iii) any material breach of any covenant or obligation of Organovo; and (iv) any event, condition, fact or circumstance that would reasonably be expected to make the timely satisfaction of any of the conditions set forth in **Article 6**, **7** or **8** impossible or materially less likely. Without limiting the generality of the foregoing, Organovo shall promptly advise Buyer in writing of any Legal Proceeding or material, written claim threatened, commenced or asserted against or with respect to, or otherwise affecting, Organovo or its Subsidiaries or, to the Knowledge of Organovo, any director, officer or Key Employee of Organovo. No notification given to Buyer pursuant to this **Section 4.2(b)** shall change, limit or otherwise affect any of the representations, warranties, covenants or obligations of Organovo or any of its Subsidiaries contained in this Agreement or the Organovo Disclosure Schedule for purposes of **Section 8.1**.

4.3 Operation of Buyer's Business.

(a) Except as set forth on Part 4.3(a) of the Buyer Disclosure Schedule, during the Pre-Closing Period: (i) each of Buyer and its Subsidiaries shall conduct its business and operations: (A) in the Ordinary Course of Business and in accordance with past practices; and (B) in compliance with all applicable Legal Requirements and the requirements of all Contracts that constitute Buyer Material Contracts; and (ii) each of Buyer and its Subsidiaries shall use commercially reasonable efforts to keep available the services of its current Key Employees and officers and maintain its relations and goodwill with all suppliers, customers, landlords, creditors, licensors, licensees and other Persons having material business relationships with Buyer or its Subsidiaries; (iii) continue to make regularly scheduled payments on its existing debt when due and payable (and

not make any prepayments), if any; (iv) continue to pay outstanding accounts payable and other current Liabilities (including payroll) when due and payable; and (v) promptly notify Organovo of: (A) any notice or other communication from any Person alleging that the Consent of such Person is or may be required in connection with any of the Contemplated Transactions; (B) any Legal Proceeding against, relating to, involving or otherwise affecting Buyer or any of its Subsidiaries that is commenced, or, to the Knowledge of Buyer, threatened against, Buyer or any of its Subsidiaries after the date of this Agreement; and (C) any notice or other communication from any Person alleging that any payment or other obligation is or will be owed to such Person at any time before or after the date of this Agreement, except for invoices or other communications related to agreements or dealings in the Ordinary Course of Business or payments or obligations identified in this Agreement, including the Buyer Disclosure Schedule.

(b) During the Pre-Closing Period, Buyer shall promptly notify Organovo in writing, by delivery of an updated Buyer Disclosure Schedule, of: (i) the discovery by Buyer of any event, condition, fact or circumstance that occurred or existed on or prior to the date of this Agreement and that caused or constitutes a material inaccuracy in any representation or warranty made by Buyer in this Agreement in a manner that causes the conditions set forth in **Section 7.1** not to be satisfied; (ii) any event, condition, fact or circumstance that occurs, arises or exists after the date of this Agreement and that would cause or constitute a material inaccuracy in any representation or warranty made by Buyer in this Agreement in a manner that causes the conditions set forth in **Section 7.1** not to be satisfied if: (A) such representation or warranty had been made as of the time of the occurrence, existence or discovery of such event, condition, fact or circumstance; or (B) such event, condition, fact or circumstance had occurred, arisen or existed on or prior to the date of this Agreement; (iii) any material breach of any covenant or obligation of Buyer; and (iv) any event, condition, fact or circumstance that would reasonably be expected to make the timely satisfaction of any of the conditions set forth in **Article 6**, **7** or **8** impossible or materially less likely. Without limiting the generality of the foregoing, Buyer shall promptly advise Organovo in writing of any Legal Proceeding or material, written claim threatened in writing, commenced or asserted against or with respect to, or otherwise affecting, Buyer or any of its Subsidiaries or, to the Knowledge of Buyer, any director, officer or Key Employee of Buyer or any of its Subsidiaries. No notification given to Organovo pursuant to this **Section 4.3(b)** shall change, limit or otherwise affect any of the representations, warranties, covenants or obligations of Buyer contained in this Agreement or the Buyer Disclosure Schedule for purposes of **Section 7.1**.

4.4 Negative Obligations.

(a) Except (i) as expressly contemplated or permitted by this Agreement, (ii) as set forth in Part 4.4(a) of the Organovo Disclosure Schedule, or (iii) with the prior written consent of Buyer, at all times during the period commencing with the execution and delivery of this Agreement and continuing until the earlier to occur of the termination of this Agreement pursuant to **Section 9** and the Effective Time, Organovo shall not, nor shall it cause or permit any of its Subsidiaries to, do any of the following:

(i) declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of its capital stock; or repurchase, redeem or otherwise reacquire any shares of its capital stock or other securities (except for shares of Organovo Common Stock from terminated employees of Organovo);

(ii) amend the certificate of incorporation, bylaws or other charter or organizational documents of Organovo, or effect or be a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction except as related to the Contemplated Transactions;

(iii) other than in connection with the Contemplated Transactions, sell, issue or grant, or authorize the issuance of (or make any commitments to do any of the foregoing): (i) any capital stock or other security (except for shares of Organovo Common Stock issued (x) upon the valid exercise of Organovo Options outstanding as of the date of this Agreement, (y) settlement of Organovo RSUs outstanding as of the date of this

Agreement or sales of shares of Organovo Common Stock issued upon vesting and/or settlement of Organovo RSUs outstanding as of the date of this Agreement to cover tax obligations upon such vesting and/or settlement, or (z) upon the valid exercise of Organovo Warrants outstanding as of the date of this Agreement); (ii) any option, warrant or right to acquire any capital stock or any other security; or (iii) any instrument convertible into or exchangeable for any capital stock or other security;

(iv) form any Subsidiary or acquire any equity interest or other interest in any other Entity;

(v) lend money to any Person; other than in the Ordinary Course of Business, incur or guarantee any indebtedness for borrowed money; issue or sell any debt securities or options, warrants, calls or other rights to acquire any debt securities; guarantee any debt securities of others; or make any capital expenditure or commitment;

(vi) adopt, establish or enter into any Organovo Employee Plan; cause or permit any Organovo Employee Plan to be amended other than as required by law, subject to prior review and approval (with such approval not to be unreasonably withheld, conditioned or delayed) by Buyer; pay any bonus or make any profit-sharing or similar payment to, or increase the amount of the wages, salary, commissions, fringe benefits or other compensation or remuneration payable to, any of its directors or employees; or increase the severance or change of control benefits offered to any current or new service providers;

(vii) other than an Organovo Asset Sale, enter into any material transaction outside the Ordinary Course of Business;

(viii) acquire any material asset nor, other than an Organovo Asset Sale, sell, lease other otherwise irrevocably dispose of any of its assets or properties, or grant any Encumbrance with respect to such assets or properties, except in the Ordinary Course of Business;

(ix) make, change or revoke any material Tax election; file any material amendment to any Tax Return; adopt or change any accounting method in respect of Taxes; change any annual Tax accounting period; enter into any Tax allocation agreement, Tax sharing agreement or Tax indemnity agreement (other than commercial Contracts entered into in the Ordinary Course of Business the principal subject matter of which is not Taxes); enter into any closing agreement with respect to any Tax; settle or compromise any claim, notice, audit report or assessment in respect of material Taxes; apply for or enter into any ruling from any Tax authority with respect to Taxes; surrender any right to claim a material Tax refund; or consent to any extension or waiver of the statute of limitations period applicable to any material Tax claim or assessment;

(x) enter into, amend or terminate any Organovo Material Contract, other than an Organovo Asset Sale;

(xi) materially change pricing or royalties or other payments set or charged by Organovo or any Organovo Subsidiary to its customers or licensees; agree to materially increase pricing or royalties or other payments set or charged by persons who have licensed Intellectual Property to Organovo; or materially increase pricing or royalties or other payments set or charged by persons who have licensed Intellectual Property to Organovo; or

(xii) agree, resolve or commit to do any of the foregoing.

(b) Except (i) as expressly contemplated or permitted by this Agreement, (ii) as set forth on Part 4.4(b) of the Buyer Disclosure Schedule, (iii) as contemplated by an Approved Financing, or (iv) with the prior written consent of Organovo (which consent shall not be unreasonably withheld, delayed or conditioned), at all times during the period commencing with the execution and delivery of this Agreement and continuing until the

earlier to occur of the termination of this Agreement pursuant to **Article 9** and the Effective Time, Buyer shall not, nor shall it cause or permit any of its Subsidiaries to, do any of the following:

(i) (i) declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of capital stock (other than for shares of Buyer Capital Stock issuable as a dividend that have accrued pursuant to Buyer's certificate of incorporation), or (ii) repurchase, redeem or otherwise reacquire any shares of capital stock or other securities (except for shares of Buyer Common Stock from terminated employees of Buyer);

(ii) amend the certificate of incorporation, bylaws or other charter or organizational documents of Buyer, or effect or be a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction, except as related to the Contemplated Transactions;

(iii) other than in connection with the Contemplated Transactions, sell, issue or grant, or authorize the issuance of (or make any commitments to do any of the foregoing): (i) any capital stock or other security (except for shares of Buyer Common Stock issued upon the valid exercise of Buyer Options or Buyer Warrants outstanding as of the date of this Agreement); (ii) any option, warrant or right to acquire any capital stock or any other security; or (iii) any instrument convertible into or exchangeable for any capital stock or other security;

(iv) form any Subsidiary or acquire any equity interest or other interest in any other Entity;

(v) other than in the Ordinary Course of Business, (i) lend money to any Person; (ii) incur or guarantee any indebtedness for borrowed money; (iii) issue or sell any debt securities or options, warrants, calls or other rights to acquire any debt securities; (iv) guarantee any debt securities of others; or (v) make any capital expenditure or commitment;

(vi) other than in the Ordinary Course of Business, (i) adopt, establish or enter into any Buyer Employee Plan, (ii) cause or permit any Buyer Employee Plan to be amended other than as required by law, (iii) pay any bonus or made any profit-sharing or similar payment to, or increase the amount of the wages, salary, commissions, fringe benefits or other compensation or remuneration payable to, any of its directors or employees, or (iv) increase the severance or change of control benefits offered to any current or new service providers;

(vii) enter into any material transaction outside the Ordinary Course of Business;

(viii) acquire any material asset nor sell, lease other otherwise irrevocably dispose of any of its assets or properties, or grant any Encumbrance with respect to such assets or properties, except in the Ordinary Course of Business;

(ix) make, change or revoke any material Tax election; file any material amendment to any Tax Return; adopt or change any accounting method in respect of Taxes; change any annual Tax accounting period; enter into any Tax allocation agreement, Tax sharing agreement or Tax indemnity agreement (other than commercial Contracts entered into in the Ordinary Course of Business the principal subject matter of which is not Taxes); settle or compromise any claim, notice, audit report or assessment in respect of material Taxes; apply for or enter into any ruling from any Tax authority with respect to Taxes; surrender any right to claim a material Tax refund; or consent to any extension or waiver of the statute of limitations period applicable to any material Tax claim or assessment;

(x) enter into, amend or terminate any Buyer Material Contract other than in the Ordinary Course of Business with respect to the business as currently being conducted;

(xi) other than in the Ordinary Course of Business, materially change pricing or royalties or other payments set or charged by Buyer or any Buyer Subsidiary to its customers or licensees; agree to materially increase pricing or royalties or other payments set or charged by persons who have licensed Intellectual Property to Buyer or materially increase pricing or royalties or other payments set or charged by persons who have licensed Intellectual Property to Buyer; or

(xii) agree, resolve or commit to do any of the foregoing.

4.5 No Solicitation.

(a) From an after the date of this Agreement until the earlier of the Effective Time or the date, if any, on which this Agreement is terminated pursuant to **Article 9**, each Party agrees that neither it nor any of its Subsidiaries shall, and each Party will use its reasonable best efforts to cause each of its the officers, directors, employees, investment bankers, attorneys, accountants, Representatives, consultants or other agents retained by it or any of its Subsidiaries not to, directly or indirectly: (i) solicit, initiate, knowingly encourage, induce or knowingly facilitate the communication, making, submission or announcement of any Acquisition Proposal or Acquisition Inquiry or take any action that would reasonably be expected to lead to an Acquisition Proposal or Acquisition Inquiry; (ii) furnish any nonpublic information regarding such Party to any Person in connection with or in response to an Acquisition Proposal or Acquisition Inquiry; (iii) engage in discussions or negotiations with any Person with respect to any Acquisition Proposal or Acquisition Inquiry; (iv) approve, endorse or recommend any Acquisition Proposal (subject to **Section 5.2** and **Section 5.3**); (v) execute or enter into any letter of intent or similar document or any Contract contemplating or otherwise relating to any Acquisition Transaction; or (vi) grant any waiver or release under any confidentiality, standstill or similar agreement (other than to the other Party); *provided*, *however*, that, notwithstanding anything contained in this **Section 4.5(a)**, prior to the adoption and approval of this Agreement by a Party's stockholders (i.e., the Required Organovo Stockholder Vote, in the instance of Organovo), (I) such Party may furnish nonpublic information regarding such Party to, and enter into discussions or negotiations with, any Person in response to a bona fide written Acquisition Inquiry or Acquisition Proposal, which such Party's Board of Directors determines in good faith, after consultation with a nationally recognized independent financial advisor, if any, and its outside legal counsel, constitutes, or would reasonably be expected to result in, a Superior Offer if: (A) neither such Party nor any Representative of such Party shall have breached this **Section 4.5**; with respect to such Acquisition Inquiry or Acquisition Proposal (B) the Board of Directors of such Party concludes in good faith based on the advice of outside legal counsel, that the failure to take such action would result in a breach of the fiduciary duties of the Board of Directors of such Party under applicable Legal Requirements; (C) prior to furnishing any such nonpublic information to, or entering into discussions with, such Person, such Party gives the other Party written notice of the identity of such Person and of such Party's intention to furnish nonpublic information to, or enter into discussions with, such Person (and the other information required by **Section 4.5(b)**); (D) such Party receives from such Person an executed confidentiality agreement containing provisions (including nondisclosure provisions, use restrictions, non-solicitation provisions, no hire provisions and "standstill" provisions) at least as favorable to such Party as those contained in the Confidentiality Agreement (and a copy of any such an executed confidentiality agreement is provided promptly to the other Party); and (E) at least five (5) Business Days prior to furnishing any such nonpublic information to such Person, such Party furnishes such nonpublic information to the other Party (to the extent such nonpublic information has not been previously furnished by such Party to the other Party), and (II) such Party may grant any waiver or release under any confidentiality, standstill or similar agreement referenced in the foregoing clause (vi) for the sole purpose of allowing any Person that has made an Acquisition Inquiry to privately make a bona fide written Acquisition Proposal, if: (A) neither such Party nor any Representative of such Party shall have breached this **Section 4.5** with respect to such Acquisition Inquiry or Acquisition Proposal; and (B) the Board of Directors of such Party concludes in good faith based on the advice of outside legal counsel, that the failure to grant such waiver or release would result in a breach of the fiduciary duties of the Board of Directors of such Party under applicable Legal Requirements. Without limiting the generality of the foregoing, each Party acknowledges and agrees that, in the event any Representative of such Party (whether or not such Representative is purporting to act on behalf of such Party) takes any action that, if

taken by such Party, would constitute a breach of this **Section 4.5** by such Party, the taking of such action by such Representative shall be deemed to constitute a breach of this **Section 4.5** by such Party for purposes of this Agreement.

(b) If any Party or any Representative of such Party receives an Acquisition Proposal or Acquisition Inquiry at any time during the Pre-Closing Period, then such Party shall promptly (and in no event later than 24 hours after such Party becomes aware of such Acquisition Proposal or Acquisition Inquiry) advise the other Party orally and in writing of such Acquisition Proposal or Acquisition Inquiry (including the identity of the Person making or submitting such Acquisition Proposal or Acquisition Inquiry, and the terms thereof, including copies of all documentation submitted to such Party reasonably relevant to evaluating such Acquisition Proposal or Acquisition Inquiry). Such Party shall keep the other Party informed in all material respects with respect to the status and terms of any such Acquisition Proposal or Acquisition Inquiry and any modification or proposed modification thereto. In addition to the foregoing, each Party shall provide the other Party with at least twenty-four (24) hours written notice of a meeting of its board of directors (or any committee thereof) at which its board of directors (or any committee thereof) is reasonably expected to consider an Acquisition Proposal or Acquisition Inquiry it has received.

(c) Each Party shall immediately cease and cause to be terminated any existing discussions, negotiations and communications with any Person that relate to any Acquisition Proposal or Acquisition Inquiry as of the date of this Agreement and cause the destruction or return of any nonpublic information provided to such Person.

ARTICLE 5

ADDITIONAL AGREEMENTS OF THE PARTIES

5.1 Registration Statement; Proxy Statement/Prospectus/Information Statement.

(a) As promptly as practicable after the date of this Agreement, the Parties shall prepare and cause to be filed with the SEC a Form S-4 Registration Statement, in which a Proxy Statement for the Organovo stockholders will be included as a prospectus. Organovo covenants and agrees that the Proxy Statement, including any pro forma financial statements included therein (and the letter to stockholders, notice of meeting and form of proxy included therewith), will not, at the time that the Proxy Statement or any amendment or supplement thereto is filed with the SEC or is first mailed to the stockholders of Organovo, at the time of the Organovo Stockholders' Meeting and at the Effective Time, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading. Organovo further covenants to keep the Form S-4 Registration Statement effective for so long as necessary to complete the Merger and pursuant to the terms of this Agreement. Prior to the Form S-4 Registration Statement being declared effective, (1) Organovo shall use its reasonable best efforts to execute and deliver to Cooley and to Gunderson the applicable "Tax Representation Letter" referenced in **Section 5.11(c)**; and (2) Organovo shall use its reasonable best efforts to execute and deliver to Gunderson and to Cooley the applicable "Tax Representation Letter" referenced in **Section 5.11(c)**. Following the delivery of the Tax Representation Letters pursuant to the preceding sentence, (x) Buyer shall use its commercially reasonable efforts to cause Cooley to deliver to it a Tax opinion satisfying the requirements of Item 601 of Regulation S-K under the Securities Act; and (y) Organovo shall use its commercially reasonable efforts to cause Gunderson to deliver to it a tax opinion satisfying the requirements of Item 601 of Regulation S-K under the Securities Act. In rendering such opinions, each of such counsel shall be entitled to rely on the Tax Representation Letters referred to in this **Section 5.1(a)** and **Section 5.11(c)**. Notwithstanding the foregoing, Organovo makes no covenant, representation or warranty with respect to statements made in the Proxy Statement (and the letter to stockholders, notice of meeting and form of proxy included therewith), if any, based on information furnished in writing by Buyer specifically for inclusion therein.

Each of the Parties shall use commercially reasonable efforts to cause the Form S-4 Registration Statement and the Proxy Statement to comply with the applicable rules and regulations promulgated by the SEC, to respond promptly to any comments of the SEC or its staff and to have the Form S-4 Registration Statement declared effective under the Securities Act as promptly as practicable after it is filed with the SEC. Each of the Parties shall use commercially reasonable efforts to cause the Proxy Statement to be mailed to Organovo's stockholders as promptly as practicable after the Form S-4 Registration Statement is declared effective under the Securities Act. Each Party shall promptly furnish to the other Party all information concerning such Party and such Party's subsidiaries and such Party's stockholders that may be required or reasonably requested in connection with any action contemplated by this **Section 5.1**. If any event relating to Organovo or Buyer occurs, or if Organovo or Buyer becomes aware of any information, that should be disclosed in an amendment or supplement to the Form S-4 Registration Statement or the Proxy Statement, then such Party shall promptly inform the other Party thereof and shall cooperate fully in filing such amendment or supplement with the SEC and, if appropriate, in mailing such amendment or supplement to Organovo's stockholders.

(b) Prior to the Effective Time, Organovo shall use commercially reasonable efforts to obtain all regulatory approvals needed to ensure that the Organovo Common Stock to be issued in the Merger (to the extent required) shall be registered or qualified or exempt from registration or qualification under the securities law of every jurisdiction of the United States in which any registered holder of Buyer Capital Stock has an address of record on the record date for determining the stockholders entitled to notice of and to vote pursuant to the Organovo Stockholders' Meeting; *provided*, *however*, that Organovo shall not be required: (i) to qualify to do business as a foreign corporation in any jurisdiction in which it is not now qualified; or (ii) to file a general consent to service of process in any jurisdiction.

(c) Buyer shall reasonably cooperate with Organovo and provide, and require its Representatives, advisors, accountants and attorneys to provide, Organovo and its Representatives, advisors, accountants and attorneys, with all true, correct and complete information regarding Buyer that is required by law to be included in the Form S-4 Registration Statement or reasonably requested from Buyer to be included in the Form S-4 Registration Statement. Without limiting the foregoing, Buyer will use commercially reasonable efforts to cause to be delivered to Organovo a letter of Buyer's independent accounting firm, dated no more than two (2) Business Days before the date on which the Form S-4 Registration Statement becomes effective (and reasonably satisfactory in form and substance to Organovo), that is customary in scope and substance for letters delivered by independent public accountants in connection with registration statements similar to the S-4 Registration Statement.

5.2 Buyer Stockholder Written Consent.

(a) Promptly after the S-4 Registration Statement shall have been declared effective under the Securities Act, and in any event no later than ten (10) Business Days thereafter, Buyer shall obtain the approval by written consent from certain of those Buyer stockholders sufficient for the Required Buyer Stockholder Vote in lieu of a meeting pursuant to Section 228 of the DGCL for purposes of (i) adopting this Agreement and approving the Merger, including the Preferred Stock Conversion, (ii) acknowledging that the approval given thereby is irrevocable and that such stockholder is aware of its rights to demand appraisal for its shares pursuant to Section 262 of the DGCL, a copy of which was attached thereto, and that such stockholder has received and read a copy of Section 262 of the DGCL, and (iii) acknowledging that by its approval of the Merger it is not entitled to appraisal rights with respect to its shares in connection with the Merger and thereby waives any rights to receive payment of the fair value of its capital stock under the DGCL. Under no circumstances shall Buyer assert that any other approval or consent is necessary by its stockholders to approve the Merger or this Agreement.

(b) Buyer agrees that, subject to **Section 5.2(c)**: (i) Buyer's Board of Directors shall recommend that Buyer's stockholders vote to adopt and approve this Agreement and the Merger and shall use its reasonable best efforts to solicit such approval within the timeframe set forth in **Section 5.2(a)** above (the recommendation

of Buyer's Board of Directors that Buyer's stockholders vote to adopt and approve this Agreement being referred to as the "***Buyer Board Recommendation***"); and (ii) the Buyer Board Recommendation shall not be withdrawn or modified in a manner adverse to Organovo, and no resolution by the Board of Directors of Buyer or any committee thereof to withdraw or modify the Buyer Board Recommendation in a manner adverse to Organovo shall be adopted or proposed.

(c) Notwithstanding anything to the contrary contained in **Section 5.2(b)**, if at any time prior to the approval of this Agreement by the Required Buyer Stockholder Vote, Buyer receives a bona fide written Acquisition Proposal (which Acquisition Proposal did not arise out of a breach of **Section 4.5**) from any Person that has not been withdrawn and, after consultation with outside legal counsel, the Buyer Board of Directors shall have determined, in good faith, that such Acquisition Proposal is a Superior Offer, the Buyer's Board of Directors may withhold, amend, withdraw or modify the Buyer Board Recommendation in a manner adverse to Organovo or recommend such Superior Offer (collectively a "***Buyer Board Adverse Recommendation Change***") if, but only if, Buyer's Board of Directors determines in good faith, based on such matters as it deems relevant following consultation with its outside legal counsel, that the failure to effect a Buyer Board Adverse Recommendation Change, in light of such Superior Offer, would constitute a breach of its fiduciary duties under applicable Legal Requirements; *provided*, that, before making a Buyer Board Adverse Recommendation Change, (i) Organovo receives written notice from Buyer confirming that Buyer's Board of Directors intends to change its recommendation at least five (5) Business Days in advance of effecting a Buyer Board Adverse Recommendation Change (the "***Buyer Recommendation Determination Notice***"); (ii) such notice describes in reasonable detail the reasons for such intention and shall specify the material terms and conditions of such Superior Offer, including the identity of the Person making such offer (and attaching the most current and complete version of any written agreement or other documents reflecting the material terms relating thereto); and (iii) if requested by Organovo, Buyer shall, during such five (5) Business Day period, negotiate with Organovo in good faith to make such adjustments to the terms and conditions of this Agreement so that the Buyer Board Adverse Recommendation Change is no longer necessary and such Acquisition Proposal no longer constitutes a Superior Offer. The requirements and provisions of this **Section 5.2(c)** shall also apply in the event of any material change to the terms of any such Acquisition Proposal and each such material change shall require a new Buyer Recommendation Determination Notice, except that the references to five (5) Business Days shall be deemed to be three (3) Business Days.

(d) Notwithstanding anything to the contrary contained in **Section 5.2(b)**, if at any time prior to the approval of this Agreement by the Required Buyer Stockholder Vote, the Buyer Board of Directors may, if an event, fact, development, circumstance or occurrence that affects or would be reasonably likely to affect the business, assets or operations of Buyer that occurs or arises after the date of this Agreement, was neither known nor reasonably foreseeable by the Buyer Board of Directors as of, or prior to, the date of this Agreement and becomes known by the Buyer Board of Directors after the date of this Agreement (a "***Buyer Intervening Event***"), effect a Buyer Board Adverse Recommendation Change if it determines in good faith, following consultation with its outside legal counsel, that the failure to effect a Buyer Board Adverse Recommendation Change in light of such Buyer Intervening Event would constitute a breach of its fiduciary duties under applicable Legal Requirements; provided, however, that the Buyer Board of Directors may not effect a Buyer Board Adverse Recommendation Change due to an Intervening Event unless (i) Organovo shall have provided prior written notice to Buyer (the "***Buyer Intervening Event Recommendation Determination Notice"*)** at least five (5) Business Days in advance of its intention to effect such Buyer Board Adverse Recommendation Change, (ii) such notice describes in reasonable detail the facts and reasons for such intention, and (iii) if requested by Organovo, Buyer shall, during such five (5) Business Day period, negotiate with Organovo in good faith to make such adjustments to the terms and conditions of this Agreement so that the Buyer Board Adverse Recommendation Change in connection with the Buyer Intervening Event is no longer necessary. The provisions of this **Section 5.2(d)** shall also apply to any material change to the facts and circumstances relating to any such Buyer Intervening Event and each such material change shall require a new Buyer Intervening Event Recommendation Determination Notice, except that the references to five (5) Business Days shall be deemed to be three (3) Business Days. For further clarity, the Buyer Board of Directors shall not be permitted to effect an

Buyer Board Adverse Recommendation Change pursuant to this **Section 5.2(d)** with respect to or in connection with any Acquisition Proposal (which shall be covered by and subject in all respects to **Section 5.2(c)**.

5.3 Organovo Stockholders' Meeting.

(a) Organovo shall take all action necessary under applicable Legal Requirements to call, give notice of and hold a meeting of the holders of Organovo Common Stock to vote on the Organovo Stockholder Proposals (such meeting, the "***Organovo Stockholders' Meeting***"). The Organovo Stockholders' Meeting shall be held as promptly as practicable after the Form S-4 Registration Statement is declared effective under the Securities Act, and in any event within forty five (45) days after the Form S-4 Registration Statement is declared effective under the Securities Act (other than to the extent that the Form S-4 Registration Statement is subject to any stop order or proceeding (or threatened proceeding by the SEC) seeking a stop order with respect to the Form S-4 Registration Statement, in which case such forty five (45) day period shall be tolled for so long as such stop order remains in effect or proceeding or threatened proceeding remains pending). Organovo shall take reasonable measures to ensure that all proxies solicited in connection with the Organovo Stockholders' Meeting are solicited in compliance with all applicable Legal Requirements.

(b) Organovo agrees that, subject to **Section 5.3(c)**: (i) Organovo's Board of Directors shall approve the New Tarveda Equity Plan and recommend that the holders of Organovo Common Stock vote to approve the Organovo Stockholder Proposals and shall use its reasonable best efforts to solicit such approval within the timeframe set forth in **Section 5.3(a)** above, (ii) the Proxy Statement shall include a statement to the effect that the Board of Directors of Organovo recommends that Organovo's stockholders vote to adopt and approve the Organovo Stockholder Proposals (the recommendation of Organovo's Board of Directors that Organovo's stockholders vote to approve the Organovo Stockholder Proposals being referred to as the "***Organovo Board Recommendation***"); and (iii) the Organovo Board Recommendation shall not be withdrawn or modified in a manner adverse to Buyer, and no resolution by the Board of Directors of Organovo or any committee thereof to withdraw or modify the Organovo Board Recommendation in a manner adverse to Buyer shall be adopted or proposed.

(c) Notwithstanding anything to the contrary contained in **Section 5.3(b)**, if at any time prior to the approval of the Organovo Stockholder Proposals by the Required Organovo Stockholder Vote, Organovo receives a bona fide written Acquisition Proposal (which Acquisition Proposal did not arise out of a breach of **Section 4.5**) from any Person that has not been withdrawn and, after consultation with outside legal counsel, the Organovo Board of Directors shall have determined, in good faith, that such Acquisition Proposal is a Superior Offer, Organovo's Board of Directors may withhold, amend, withdraw or modify the Organovo Board Recommendation in a manner adverse to Buyer or recommend such Superior Offer (collectively an "***Organovo Board Adverse Recommendation Change***") if, but only if, Organovo's Board of Directors determines in good faith, based on such matters as it deems relevant following consultation with its outside legal counsel, that the failure to effect an Organovo Board Adverse Recommendation Change, in light of such Superior Offer, would constitute a breach of its fiduciary duties under applicable Legal Requirements; *provided*, that, before making an Organovo Board Adverse Recommendation Change, (i) Buyer receives written notice from Organovo confirming that Organovo's Board of Directors intends to change its recommendation at least five (5) Business Days in advance of effecting an Organovo Board Adverse Recommendation Change (the "***Organovo Recommendation Determination Notice***"); (ii) such notice describes in reasonable detail the reasons for such intention and shall specify the material terms and conditions of such Superior Offer, including the identity of the Person making such offer (and attaching the most current and complete version of any written agreement or other documents reflecting the material terms relating thereto); and (iii) if requested by Buyer, Organovo shall, during such five (5) Business Day period, negotiate with Buyer in good faith to make such adjustments to the terms and conditions of this Agreement so that the Organovo Board Adverse Recommendation Change is no longer necessary and such Acquisition Proposal no longer constitutes a Superior Offer. The requirements and provisions of this **Section 5.3(c)** shall also apply in the event of any material change to the terms of any such Acquisition Proposal and each such material change shall require a new Organovo Recommendation Determination Notice, except that the references to five (5) Business Days shall be deemed to be three (3) Business Days.

(d) Notwithstanding anything to the contrary contained in **Section 5.3(b)**, if at any time prior to the approval of the Organovo Stockholder Proposals, the Organovo Board of Directors may, if an event, fact, development, circumstance or occurrence that affects or would be reasonably likely to affect the business, assets or operations of Organovo that occurs or arises after the date of this Agreement, was neither known nor reasonably foreseeable by the Organovo Board of Directors as of, or prior to, the date of this Agreement and becomes known by the Organovo Board of Directors after the date of this Agreement (an "***Organovo Intervening Event***"), effect an Organovo Board Adverse Recommendation Change if it determines in good faith, following consultation with its outside legal counsel, that the failure to effect an Organovo Board Adverse Recommendation Change in light of such Organovo Intervening Event would constitute a breach of its fiduciary duties under applicable Legal Requirements; provided, however, that the Organovo Board of Directors may not effect an Organovo Board Adverse Recommendation Change due to an Intervening Event unless (i) Organovo shall have provided prior written notice to Buyer (the "***Organovo Intervening Event Recommendation Determination Notice"*)** at least five (5) Business Days in advance of its intention to effect such Organovo Board Adverse Recommendation Change, (ii) such notice describes in reasonable detail the facts and reasons for such intention, and (iii) if requested by Buyer, Organovo shall, during such five (5) Business Day period, negotiate with Buyer in good faith to make such adjustments to the terms and conditions of this Agreement so that the Organovo Board Adverse Recommendation Change in connection with the Organovo Intervening Event is no longer necessary. The provisions of this **Section 5.3(d)** shall also apply to any material change to the facts and circumstances relating to any such Organovo Intervening Event and each such material change shall require a new Organovo Intervening Event Recommendation Determination Notice, except that the references to five (5) Business Days shall be deemed to be three (3) Business Days. For further clarity, the Organovo Board of Directors shall not be permitted to effect an Organovo Board Adverse Recommendation Change pursuant to this **Section 5.3(d)** with respect to or in connection with any Acquisition Proposal (which shall be covered by and subject in all respects to **Section 5.3(c)**.

(e) Nothing contained in this Agreement shall prohibit Organovo or its Board of Directors from (i) taking and disclosing to the stockholders of Organovo a position as contemplated by Rule 14e-2(a) under the Exchange Act or complying with the provisions of Rule 14d-9 under the Exchange Act (other than Rule 14d-9(f) under the Exchange Act), and (ii) making a "stop, look and listen" communication to the stockholders of Organovo pursuant to Rule 14d-9(f) under the Exchange Act, *provided*, *however*, that this **Section 5.3(e)** shall not be deemed to affect whether any such disclosure, other than such a "stop, look and listen" communication, would otherwise be deemed to be an Organovo Board Adverse Recommendation Change. Organovo shall not affect an Organovo Board Adverse Recommendation Change unless specifically permitted pursuant to the terms of **Sections 5.3(c) and (d)**. For clarity, a factually accurate public statement that describes Organovo's receipt of an Acquisition Proposal, that no position has been taken by the Organovo Board of Directors as to the advisability or desirability of such Acquisition Proposal and the operation of this Agreement with respect thereto will not be deemed an Organovo Board Adverse Recommendation Change.

5.4 Regulatory Approvals. Each Party shall use commercially reasonable efforts to file or otherwise submit, as soon as practicable after the date of this Agreement, all applications, notices, reports and other documents reasonably required to be filed by such Party with or otherwise submitted by such Party to any Governmental Body with respect to the Contemplated Transactions, and to submit promptly any additional information requested by any such Governmental Body. Buyer and Organovo shall respond as promptly as is practicable to respond in compliance with: (i) any inquiries or requests received from the Federal Trade Commission or the Department of Justice for information or documentation; and (ii) any inquiries or requests received from any state attorney general, foreign antitrust or competition authority or other Governmental Body in connection with antitrust or competition matters.

5.5 Buyer Options and Warrants.

(a) At the Effective Time, each Buyer Option that is outstanding and unexercised immediately prior to the Effective Time under the Equity Incentive Plan, whether or not vested, shall be converted into and

become an option to purchase Organovo Common Stock, and Organovo shall assume the Equity Incentive Plan and each such Buyer Option in accordance with the terms of the Equity Incentive Plan and the terms of the stock option agreement by which such Buyer Option is evidenced. All rights with respect to Buyer Common Stock under Buyer Options assumed by Organovo shall thereupon be converted into rights with respect to Organovo Common Stock. Accordingly, from and after the Effective Time: (i) each Buyer Option assumed by Organovo may be exercised solely for Organovo Common Stock; (ii) the number of shares of Organovo Common Stock subject to each Buyer Option assumed by Organovo shall be determined by multiplying (A) the number of shares of Buyer Common Stock that were subject to such Buyer Option, as in effect immediately prior to the Effective Time, by (B) the Exchange Ratio and rounding the resulting number down to the nearest whole number of shares of Organovo Common Stock; (iii) the per share exercise price for the Organovo Common Stock issuable upon exercise of each Buyer Option assumed by Organovo shall be determined by dividing (A) the per share exercise price of the shares of Buyer Common Stock subject to such Buyer Option, as in effect immediately prior to the Effective Time, by (B) the Exchange Ratio and rounding the resulting exercise price up to the nearest whole cent; and (iv) any restriction on the exercise of any Buyer Option assumed by Organovo shall continue in full force and effect and the term, exercisability, vesting schedule and other provisions of such Buyer Option shall otherwise remain unchanged; *provided*, *however*, that: (A) to the extent provided under the terms of a Buyer Option, such Buyer Option assumed by Organovo in accordance with this **Section 5.5(a)** shall, in accordance with its terms, be subject to further adjustment as appropriate to reflect any stock split, division or subdivision of shares, stock dividend, reverse stock split, consolidation of shares, reclassification, recapitalization or other similar transaction with respect to Organovo Common Stock subsequent to the Effective Time; and (B) Organovo's Board of Directors or a committee thereof shall succeed to the authority and responsibility of Buyer's Board of Directors or any committee thereof with respect to each Buyer Option assumed by Organovo. Notwithstanding anything to the contrary in this **Section 5.5(a)**, the conversion of each Buyer Option (regardless of whether such option qualifies as an "incentive stock option" within the meaning of Section 422 of the Code) into an option to purchase shares of Organovo Common Stock shall be made in a manner consistent with Treasury Regulation Section 1.424-1, such that the conversion of a Buyer Option shall not constitute a "modification" of such Buyer Option for purposes of Section 409A or Section 424 of the Code.

(b) Organovo shall file with the SEC, no later than thirty (30) days after the Effective Time, a registration statement on Form S-8, if available for use by Organovo, relating to the shares of Organovo Common Stock issuable with respect to Buyer Options assumed by Organovo in accordance with **Section 5.5(a)**.

(c) Subject to **Section 5.5(d)**, at the Effective Time, each Buyer Warrant that is outstanding and unexercised immediately prior to the Effective Time (for the avoidance of doubt, excluding Buyer Warrants that are deemed to have been automatically exercised pursuant to their terms as a result of the consummation of the Merger), if any, shall be converted into and become a warrant to purchase shares of Organovo Common Stock and Organovo shall assume each such Buyer Warrant in accordance with its terms. All rights with respect to Buyer Common Stock under Buyer Warrants assumed by Organovo shall thereupon be converted into rights with respect to shares of Organovo Common Stock. Accordingly, from and after the Effective Time: (i) each Buyer Warrant assumed by Organovo may be exercised solely for shares of Organovo Common Stock; (ii) the number of shares of Organovo Common Stock subject to each Buyer Warrant assumed by Organovo shall be determined by multiplying (A) the number of shares of Buyer Common Stock, or the number of shares of Buyer Common Stock issuable upon exercise of the Buyer Warrants, that were subject to such Buyer Warrant immediately prior to the Effective Time by (B) the Exchange Ratio and rounding the resulting number down to the nearest whole number of shares of Organovo Common Stock; (iii) the per share exercise price for the shares of Organovo Common Stock issuable upon exercise of each Buyer Warrant assumed by Organovo shall be determined by dividing the per share exercise price of Buyer Common Stock subject to such Buyer Warrant, as in effect immediately prior to the Effective Time, by the Exchange Ratio and rounding the resulting exercise price up to the nearest whole cent; and (iv) any restriction on any Buyer Warrant assumed by Organovo shall continue in full force and effect and the term and other provisions of such Buyer Warrant shall otherwise remain unchanged.

(d) Prior to the Effective Time, Buyer shall take all actions that may be necessary (under the Equity Incentive Plan, the Buyer Warrants and otherwise) to effectuate the provisions of this **Section 5.5** and to ensure that, from and after the Effective Time, holders of Buyer Options and Buyer Warrants have no rights with respect thereto other than those specifically provided in this **Section 5.5**.

5.6 Employee Benefits. Effective as of the day immediately preceding the Closing Date, Organovo shall terminate all Organovo Employee Plans that are "employee benefit plans" within the meaning of ERISA, including any Organovo Employee Plans intended to include a Section 401(k) arrangement (unless Buyer provides written notice to Organovo no later than three Business Days prior to the Closing Date that such 401(k) plans or other Organovo Employee Plans shall not be terminated). Organovo shall provide Buyer with evidence that such Organovo Employee Plan(s) have been terminated (effective no later than the day immediately preceding the Closing Date) pursuant to resolutions of Organovo's Board of Directors (or other relevant committee thereof or governing body). The form and substance of such resolutions shall be subject to review and approval by Buyer. Organovo shall also take such other actions in furtherance of terminating such Organovo Employee Plan(s) as Buyer may reasonably require. In the event that termination of Organovo's 401(k) plan would reasonably be anticipated to trigger liquidation charges, surrender charges or other fees then Organovo shall take such actions as are necessary to reasonably estimate the amount of such charges and/or fees and provide such estimate in writing to Buyer.

5.7 Indemnification of Officers and Directors.

(a) From the Effective Time through the sixth anniversary of the date on which the Effective Time occurs, each of Organovo and the Surviving Corporation shall, jointly and severally, indemnify and hold harmless each person who is now, or has been at any time prior to the date hereof, or who becomes prior to the Effective Time, a director or officer of Organovo or Buyer (the "***D&O Indemnified Parties***"), against all claims, losses, liabilities, damages, judgments, fines and reasonable fees, costs and expenses, including attorneys' fees and disbursements (collectively, "***Costs***"), incurred in connection with any claim, action, suit, proceeding or investigation, whether civil, criminal, administrative or investigative, arising out of or pertaining to the fact that the D&O Indemnified Party is or was a director or officer of Organovo or Buyer, whether asserted or claimed prior to, at or after the Effective Time, to the fullest extent permitted under the DGCL for directors or officers of Delaware corporations. Each D&O Indemnified Party will be entitled to advancement of expenses incurred in the defense of any such claim, action, suit, proceeding or investigation from Organovo and the Surviving Corporation, jointly and severally, upon receipt by Organovo or the Surviving Corporation from the D&O Indemnified Party of a request therefor; *provided*, that any person to whom expenses are advanced provides an undertaking, to the extent then required by the DGCL, as applicable, to repay such advances if it is ultimately determined that such person is not entitled to indemnification.

(b) The Certificate of Incorporation and Bylaws of each of Organovo and the Surviving Corporation shall contain, and Organovo shall cause the Certificate of Incorporation and Bylaws of the Surviving Corporation to so contain, provisions no less favorable with respect to indemnification, advancement of expenses and exculpation of present and former directors and officers of each of Organovo and Buyer than are presently set forth in the Certificate of Incorporation and Bylaws of Organovo and Buyer, applicable, which provisions shall not be amended, modified or repealed for a period of six years' time from the Effective Time in a manner that would adversely affect the rights thereunder of individuals who, at or prior to the Effective Time, were officers or directors of Organovo and Buyer, as applicable.

(c) Organovo shall purchase an insurance policy with an effective date as of the Closing which maintains in effect for six years from the Closing the current directors' and officers' liability insurance policies maintained by Organovo; *provided*, that Organovo may, at its sole cost and expense, substitute therefor policies of at least the same coverage containing terms and conditions that are not materially less favorable.

(d) Organovo shall pay all expenses, including reasonable attorneys' fees, that are incurred by the persons referred to in this **Section 5.7** in connection with their successful enforcement of their rights provided in this **Section 5.7**.

(e) The provisions of this **Section 5.7** are intended to be in addition to the rights otherwise available to the current and former officers and directors of Organovo and the Buyer, as applicable, by law, charter, statute, bylaw or agreement, and shall operate for the benefit of, and shall be enforceable by, each of the D&O Indemnified Parties, their heirs and their representatives. In addition to the rights provided by this Agreement, to the extent that current and former officers and directors of Organovo have existing rights under any agreement between such officer or director and Organovo with respect to indemnification, the Surviving Corporation will take all good faith efforts necessary to maintain in place such other agreement and to indemnify such officer or director to the maximum extent possible under this Agreement as well as such other agreement.

(f) In the event Organovo or the Surviving Corporation or any of their respective successors or assigns (i) consolidates with or merges into any other person and shall not be the continuing or surviving corporation or entity of such consolidation or merger, or (ii) transfers all or substantially all of its properties and assets to any person, then, and in each such case, proper provision shall be made so that the successors and assigns of Organovo or the Surviving Corporation, as the case may be, shall succeed to the obligations set forth in this **Section 5.7**.

5.8 Additional Agreements(a) . (a) The Parties shall use commercially reasonable efforts to cause to be taken all actions necessary to consummate the Contemplated Transactions. Without limiting the generality of the foregoing, each Party to this Agreement: (i) shall make all filings and other submissions (if any) and give all notices (if any) required to be made and given by such Party in connection with the Contemplated Transactions; (ii) shall use commercially reasonable efforts to obtain each Consent (if any) reasonably required to be obtained (pursuant to any applicable Legal Requirement or Contract, or otherwise) by such Party in connection with the Contemplated Transactions or for such Contract to remain in full force and effect; (iii) shall use commercially reasonable efforts to lift any injunction prohibiting, or any other legal bar to, the Contemplated Transactions; and (iv) shall use commercially reasonable efforts to satisfy the conditions precedent to the consummation of this Agreement.

(b) Notwithstanding anything to the contrary contained in this Agreement, no Party shall have any obligation under this Agreement: (i) to dispose of or transfer or cause any of its Subsidiaries to dispose of or transfer any assets; (ii) to discontinue or cause any of its Subsidiaries to discontinue offering any product or service; (iii) to license or otherwise make available, or cause any of its Subsidiaries to license or otherwise make available to any Person any Intellectual Property; (iv) to hold separate or cause any of its Subsidiaries to hold separate any assets or operations (either before or after the Closing Date); (v) to make or cause any of its Subsidiaries to make any commitment (to any Governmental Authority or otherwise) regarding its future operations; or (vi) to contest any Legal Proceeding or any order relating to the Merger or any of the other Contemplated Transactions if such Party determines in good faith that contesting such Legal Proceeding or order might not be advisable.

5.9 Disclosure. Without limiting any of either Party's obligations under the Confidentiality Agreement, each Party shall not, and shall not permit any of its Subsidiaries or any Representative of such Party to, issue any press release or make any disclosure (to any customers or employees of such Party, to the public or otherwise) regarding the Contemplated Transactions unless: (a) the other Party shall have approved such press release or disclosure in writing; or (b) such Party shall have determined in good faith, upon the advice of outside legal counsel, that such disclosure is required by applicable Legal Requirements and, to the extent practicable, before such press release or disclosure is issued or made, such Party advises the other Party of, and consults with the other Party regarding, the text of such press release or disclosure; *provided*, *however*, that each of Buyer and Organovo may make any public statement in response to specific questions by the press, analysts, investors or those attending industry conferences or financial analyst conference calls, so long as any such statements are

consistent with previous press releases, public disclosures or public statements made by Buyer or Organovo in compliance with this **Section 5.9**.

5.10 Listing. Organovo shall use its commercially reasonable efforts: (i) to maintain its existing listing on The Nasdaq Global Market or The Nasdaq Capital Market until the Closing Date and to obtain approval of the listing of the combined company on The Nasdaq Global Market or The Nasdaq Capital Market; (ii) without derogating from the generality of the requirements of clause "(i)" and to the extent required by the rules and regulations of Nasdaq, to (x) prepare and submit to Nasdaq a notification form for the listing of the shares of Organovo Common Stock to be issued and (y) to cause such shares to be approved for listing (subject to notice of issuance) on The Nasdaq Global Market or The Nasdaq Capital Market; and (iii) to the extent required by Nasdaq Marketplace Rule 5110, to file an initial listing application for the Organovo Common Stock on Nasdaq (the "***Nasdaq Listing Application***") and to cause such Nasdaq Listing Application to be conditionally approved prior to the Effective Time. Buyer will cooperate with Organovo as reasonably requested by Organovo with respect to the Nasdaq Listing Application and promptly furnish to Organovo all information concerning Buyer and its stockholders that may be required or reasonably requested in connection with any action contemplated by this **Section 5.10**.

5.11 Tax Matters.

(a) Organovo, Merger Sub and Buyer shall use their respective reasonable best efforts to cause the Merger to qualify, and agree not to, and not to permit or cause any Affiliate or any Subsidiary to, take any actions or cause any action to be taken which would reasonably be expected to prevent the Merger from qualifying, as a "reorganization" under Section 368(a) of the Code.

(b) This Agreement is intended to constitute, and the parties hereto hereby adopt this Agreement as, a "plan of reorganization" within the meaning of Treasury Regulations section 1.368-2(g). The Parties shall treat and shall not take any Tax reporting position inconsistent with the treatment of the Merger as a reorganization within the meaning of Section 368(a) of the Code for U.S. federal, state and other relevant Tax purposes, unless otherwise required pursuant to a "determination" within the meaning of Section 1313(a) of the Code.

(c) Organovo shall use its reasonable best efforts to deliver to Gunderson and Cooley LLP ("***Cooley***") (or to Organovo's Replacement Counsel or Buyer's Replacement Counsel, in each case, if applicable) a "Tax Representation Letter," dated as of the Closing Date and signed by an officer of Organovo, containing representations of Organovo substantially in the form set forth in Section 5.11(c) of the Organovo Disclosure Schedule, and Buyer shall use its reasonable best efforts to deliver to Gunderson and Cooley (or to Organovo's Replacement Counsel or Buyer's Replacement Counsel, in each case, if applicable) a "Tax Representation Letter," dated as of the Closing Date and signed by an officer of Buyer, containing representations of Buyer substantially in the form set forth in Section 5.11(c) of the Buyer Disclosure Schedule, in each case as shall be reasonably necessary or appropriate to enable Cooley (or Buyer's Replacement Counsel, if applicable) to render the opinion described in **Section 8.9** of this Agreement and Gunderson (or Organovo's Replacement Counsel, if applicable) to render the opinion described in **Section 7.7** of this Agreement. Each of the parties shall use its reasonable best efforts not to, and not permit any affiliate or any Subsidiary to, take or cause to be taken any action that would cause to be untrue (or fail to take or cause not to be taken any action which inaction would cause to be untrue) any of the representations and covenants made to counsel in the Tax representation letters described in this **Section 5.11(c)**.

5.12 Legends. Organovo shall be entitled to place appropriate legends on the certificated and non-certificated book entries evidencing any Organovo Common Stock to be received by equity holders of Buyer who may be considered "affiliates" of Organovo for purposes of Rules 144 and 145 under the Securities Act reflecting the restrictions set forth in Rules 144 and 145 and to issue appropriate stop transfer instructions to the transfer agent for Organovo Common Stock.

5.13 Cooperation. Each Party shall cooperate reasonably with the other Party and shall provide the other Party with such assistance as may be reasonably requested for the purpose of facilitating the performance by each Party of its respective obligations under this Agreement, to cause the Closing to occur as promptly as reasonably possible and to enable the combined entity to continue to meet its obligations following the Closing.

5.14 Directors and Officers. Organovo and Buyer shall obtain and deliver to the other Party at or prior to the Effective Time the resignation of each officer and director of Organovo or Buyer who is not continuing as an officer or director of Organovo following the Effective Time. Immediately after the Effective Time, Organovo's Board of Directors shall consist of eight (8) members, six (6) of whom shall be designated by Buyer and two (2) of whom shall be designated by members of Organovo's Board of Directors prior to the Effective Time. Prior to the Effective Time, but to be effective at the Effective Time, the Board of Directors of Organovo shall appoint such six (6) board designees selected by Buyer prior to the Closing Date. Immediately following the Effective Time, a majority of the members of Organovo's Board of Directors shall meet the requisite independence requirements of Nasdaq's listing standards. The Parties shall further take all necessary action so that the Persons listed in Schedule 5.14 are elected or appointed, as applicable, to the positions of officers and directors of Organovo and the Surviving Corporation, as set forth therein, to service in such positions effective as of the Effective Time. If any Person designated as a director pursuant to this **Section 5.14** is unable or unwilling to serve as a director of Organovo after the Effective Time, as set forth therein, the Party appointing such Person shall designate a successor.

5.15 Section 16 Matters. Prior to the Effective Time, Organovo shall take all such steps as may be required to cause any acquisitions of Organovo Common Stock and any options to purchase Organovo Common Stock resulting from the Merger, by each individual who is reasonably expected to become subject to the reporting requirements of Section 16(a) of the Exchange Act with respect to Organovo, to be exempt under Rule 16b-3 promulgated under the Exchange Act.

5.16 Reverse Split and Corporate Name Change. Organovo shall submit to the holders of Organovo Common Stock at the Organovo Stockholders' Meeting a proposal to approve and adopt an amendment to the Organovo Certificate of Incorporation to authorize the Board of Directors of Organovo to effect a reverse stock split of all outstanding shares of Organovo Common Stock at a reverse stock split ratio in the range mutually agreed to by Organovo and Buyer (the "***Reverse Split***") and to effect the Corporate Name Change.

5.17 Termination of Certain Agreements and Rights. Buyer shall use its commercially reasonable efforts to terminate at or prior to the Effective Time, those agreements set forth on Schedule C (collectively, the "***Investor Agreements***").

5.18 Certificates.

(a) Buyer will prepare and deliver to Organovo at least two (2) Business Days prior to the Closing Date a certificate signed by the Chief Financial Officer and Secretary of Buyer in a form reasonably acceptable to Organovo which sets forth a true and complete list of the holders of Buyer Common Stock, Buyer Option and Buyer Warrants as of immediately prior to the Effective Time and the number of shares of Buyer Common Stock owned and/or underlying the Buyer Options or Buyer Warrants held by such holders (the "***Allocation Certificate***").

(b) Organovo shall prepare and deliver to Buyer at least five (5) calendar days prior to the Closing Date a certificate signed by the Chief Financial Officer of Organovo in a form reasonably acceptable to Buyer which sets forth an estimate prepared in good faith of (i) the Organovo Net Cash and (ii) Organovo Debt, each as of the Closing Date, determined in a manner consistent with the manner in which such items were historically determined and in accordance with Buyer's most recent audited financial statements which certificate shall be accompanied by such supporting documentation, information and calculations as are reasonably

requested by Buyer to verify and determine the information contained therein (the "***Estimated Net Cash Certificate***").

(c) Buyer shall prepare and deliver to Organovo at least five (5) calendar days prior to the Closing Date a certificate signed by the Chief Financial Officer of Buyer in a form reasonably acceptable to Organovo which sets forth an itemized list of each element of Buyer's (i) cash and cash equivalents and (ii) Buyer Debt, each as of the Closing Date determined in a manner consistent with the manner in which such items were historically determined and in accordance with Buyer's most recent audited financial statements (the "***Buyer Estimated Cash and Debt Statement***") which certificate shall be accompanied by such supporting documentation, information and calculations as are reasonably requested by Organovo to verify and determine the information contained therein.

5.19 Litigation. From and after the date of this Agreement until the earlier of the Effective Time or the date, if any, on which this Agreement is terminated pursuant to **Article 10**, Organovo shall promptly notify Buyer of any litigation brought, or threatened, against Organovo and/or members of the Board of Directors of Organovo or any of its officers relating to the Contemplated Transactions or otherwise and shall keep Buyer informed on a reasonably current basis with respect to the status thereof. From and after the date of this Agreement until the earlier of the Effective Time or the date, if any, on which this Agreement is terminated pursuant to **Article 10**, Buyer shall promptly notify Organovo of any litigation brought, or threatened, against Buyer and/or members of the Board of Directors of Buyer or any of its officers relating to the Contemplated Transactions or otherwise and shall keep Organovo informed on a reasonably current basis with respect to the status thereof. Each Party shall give the other Party the right to review and comment on all material filings or responses to be made by such Party in connection with the foregoing and, no settlement shall be agreed to in connection with the foregoing without the other Party's prior written consent (such consent not to be unreasonably withheld, conditioned or delayed). Organovo shall give Buyer the opportunity to participate in the defense or settlement of any stockholder litigation or investigation relating to this Agreement or any of the Contemplated Transactions, and, to the extent any such litigation or investigation is ongoing prior to the Effective Time, shall not settle any such litigation or investigation without Buyer's written consent (which consent shall not be unreasonably withheld).

5.20 Organovo Asset Sale. Buyer and Organovo agree that Organovo may (i) without the prior written consent of Buyer, sell, assign, or otherwise dispose of, in one or more transactions, IP Rights, inventory, equipment and related agreements, assets and technology at any time prior to, concurrent with or immediately after the Closing in a transaction with a sales price less than $250,000, provided that such purchase price is actually paid in cash prior to, concurrent with or immediately after the Closing, (ii) without the prior written consent of Buyer, sell, assign, or otherwise dispose of, in one or more transactions, IP Rights, inventory, equipment and related agreements, assets and technology at any time concurrent with the Closing where the terms of the definitive agreement provide that the purchase price is to be placed in escrow and released concurrently with or immediately prior to the Closing without the requirement that any other conditions are satisfied prior to the release of the purchase price from escrow (other than customary conditions related to delivery of assets and assignment agreements) and (iii) subject to subsection (i) of this **Section 5.20**, with the prior written consent of Buyer (which consent shall not be unreasonably withheld, conditioned or delayed), sell, assign, or otherwise dispose of, in one or more transactions, IP Rights, inventory, equipment and related agreements, assets and technology at any time prior to or immediately after the Closing, provided that each such sale or disposition listed in (ii) and (iii) of this **Section 5.20** is also approved by the Organovo Board of Directors or a committee thereof (each such sale or disposition listed in (i), (ii) and (iii), an "***Organovo Asset Sale***"). Organovo shall provide Buyer with written notice of any proposed Organovo Asset Sale at least seven (7) Business Days prior to the consummation of such Organovo Asset Sale, which notice shall include the material terms relating to such Organovo Asset Sale (including the potential continuing obligations or liabilities).

ARTICLE 6

CONDITIONS PRECEDENT TO OBLIGATIONS OF EACH PARTY

The obligations of each Party to effect the Contemplated Transactions and otherwise consummate the transactions to be consummated at the Closing are subject to the satisfaction or, to the extent permitted by applicable law, the written waiver by each of the Parties, at or prior to the Closing, of each of the following conditions:

6.1 Effectiveness of Registration Statement. The Form S-4 Registration Statement shall have become effective in accordance with the provisions of the Securities Act, and shall not be subject to any stop order or proceeding (or threatened proceeding by the SEC) seeking a stop order with respect to the Form S-4 Registration Statement.

6.2 No Restraints. No temporary restraining order, preliminary or permanent injunction or other order preventing the consummation of the Contemplated Transactions shall have been issued by any court of competent jurisdiction or other Governmental Body of competent jurisdiction and remain in effect, and there shall not be any Legal Requirement which has the effect of making the consummation of the Contemplated Transactions illegal.

6.3 Stockholder Approval. This Agreement, the Merger and the other transactions contemplated by this Agreement shall have been duly adopted and approved by the required Buyer Stockholder Vote, and this Agreement, the Contemplated Transactions, the issuance of Organovo Common Stock and the Reverse Split shall have been duly approved by the Required Organovo Stockholder Vote.

6.4 No Governmental Proceedings Relating to Contemplated Transactions or Right to Operate Business. There shall not be any Legal Proceeding pending, or overtly threatened in writing by an official of a Governmental Body in which such Governmental Body indicates that it intends to conduct any Legal Proceeding or take any other action: (a) challenging or seeking to restrain or prohibit the consummation of the Contemplated Transactions; (b) relating to the Contemplated Transactions and seeking to obtain from Organovo or Buyer any damages or other relief that may be material to Organovo, Merger Sub or Buyer; (c) seeking to prohibit or limit in any material and adverse respect a Party's ability to vote, transfer, receive dividends with respect to or otherwise exercise ownership rights with respect to the Organovo Common Stock; (d) that would materially and adversely affect the right or ability of Organovo or Buyer to own the assets or operate the business of Organovo or Buyer; or (e) seeking to compel Buyer or Organovo (or any of their respective Subsidiaries) to dispose of or hold separate any material assets as a result of the Contemplated Transactions.

6.5 Listing. The existing shares of Organovo Common Stock shall have been continually listed on The Nasdaq Global Market or The Nasdaq Capital Market as of and from the date of this Agreement through the Closing Date, and the shares of Organovo Common Stock to be issued in the Merger shall be approved for listing (subject to official notice of issuance) on The Nasdaq Global Market or The Nasdaq Capital Market as of the Effective Time; provided, however, that the continued listing of shares of Organovo Common Stock is subject to the Closing .

ARTICLE 7

ADDITIONAL CONDITIONS PRECEDENT TO OBLIGATIONS OF ORGANOVO AND MERGER SUB

The obligations of Organovo and Merger Sub to effect the Contemplated Transactions and otherwise consummate the transactions to be consummated at the Closing are subject to the satisfaction or the written waiver by Organovo, at or prior to the Closing, of each of the following conditions:

7.1 Accuracy of Representations. The representations and warranties of Buyer contained in this Agreement shall have been true and correct as of the date of this Agreement and shall be true and correct on and as of the Closing Date with the same force and effect as if made on the Closing Date except (A) in each case, or in the aggregate, where the failure to be true and correct would not reasonably be expected to have a Buyer Material Adverse Effect (except for the representations and warranties of the Buyer set forth in **Section 2.3(a)** of the Agreement), (B) the representations and warranties of Buyer set forth in **Section 2.3(a)** of the Agreement shall have been true and correct in all respects as of the date of the Agreement and shall be true and correct in all respects at and as of the Closing Date as if made on and as of such time except, other than as a result of a Willful Breach by Buyer, where the failure to be so accurate in all respects would not reasonably be expected to result in additional cost, expense or liability to Buyer, Organovo and their Affiliates, individually or in the aggregate, that is more than $250,000 or (C) for those representations and warranties which address matters only as of a particular date (which representations shall have been true and correct, subject to the qualifications as set forth in the preceding clauses (A)-(B), as of such particular date) (it being understood that, for purposes of determining the accuracy of such representations and warranties, any update of or modification to the Buyer Disclosure Schedule made or purported to have been made after the date of this Agreement shall be disregarded).

7.2 Performance of Covenants. Each of the covenants and obligations in this Agreement that Buyer is required to comply with or to perform at or prior to the Closing shall have been complied with and performed by Buyer in all material respects.

7.3 Documents. Organovo shall have received the following agreements and other documents, each of which shall be in full force and effect:

(a) a certificate executed by the Chief Executive Officer and Chief Financial Officer of Buyer confirming that the conditions set forth in **Sections 7.1**, **7.2**, **7.4**, **7.5**, **7.6** and have been duly satisfied;

(b) certificates of good standing (or equivalent documentation) of Buyer in its jurisdiction of organization and the various foreign jurisdictions in which it is qualified, certified charter documents, a certificate as to the incumbency of officers and the adoption of resolutions of the board of directors of Buyer authorizing the execution of this Agreement and the consummation of the Contemplated Transactions to be performed by Buyer hereunder;

(c) written resignations in forms reasonably satisfactory to Organovo, dated as of the Closing Date and effective as of the Closing, executed by the officers and directors of Buyer who will not be officers or directors of the Surviving Corporation pursuant to **Section 5.14** hereof;

(d) the Buyer Closing Financial Certificate, which certificate shall be accompanied by such supporting documentation, information and calculations as are reasonably requested by Buyer to verify and determine the information contained therein;

(e) the Allocation Certificate; and

(f) (i) an original signed statement from Buyer that Buyer is not, and has not been at any time during the applicable period specified in Section 897(c)(1)(A)(ii) of the Code, a “United States real property

holding corporation," as defined in Section 897(c)(2) of the Code, conforming to the requirements of Treasury Regulations Section 1.1445-2(c)(3) and 1.897-2(h), and (ii) an original signed notice to be delivered to the IRS in accordance with the requirements of Treasury Regulations Section 1.897-2(h)(2), together with written authorization for Organovo to deliver such notice to the IRS on behalf of the Buyer following the Closing, each dated as of the Closing Date, duly executed by an authorized officer of the Buyer.

7.4 No Buyer Material Adverse Effect. Since the date of this Agreement, there shall not have occurred any Buyer Material Adverse Effect that is continuing.

7.5 Termination of Investor Agreements. The Investor Agreements shall have been terminated.

7.6 Preferred Stock Conversion. Buyer shall have effected a conversion of Buyer Preferred Stock into Common Stock immediately prior to the Effective Time (the "***Preferred Stock Conversion***").

7.7 Tax Opinion. Organovo shall have received (i) a written opinion from Gunderson, counsel to Organovo (or if Gunderson is unable to issue such an opinion, of another nationally recognized law firm proposed by Buyer that is reasonably acceptable to Organovo ("***Organovo's Replacement Counsel***")), dated the Closing Date, based on the facts, representations, assumptions and exclusions set forth or described in such opinion, and substantially in the form set forth in Section 7.7 of the Organovo Disclosure Schedule to the effect that, for United States federal income Tax purposes, the Merger will qualify as a "reorganization" under the provisions of Section 368(a) of the Code and the Treasury Regulations promulgated thereunder (the "***Organovo Tax Opinion***") and (ii) a copy of the Buyer Tax Opinion. In rendering the Organovo Tax Opinion, Gunderson (or Organovo's Replacement Counsel, if applicable) shall be entitled to rely upon customary assumptions, representations, warranties and covenants reasonably satisfactory to it, including the representations set forth in the certificates of officers of Organovo and Buyer, in substantially the forms set forth in Section 5.11(c) of the Organovo Disclosure Schedule and Section 5.11(c) of Buyer Disclosure Schedule.

7.8 Buyer Lock-Up Agreements. The Buyer Lock-up Agreements will continue to be in full force and effect as of immediately following the Effective Time.

7.9 Debt Conversion and Indebtedness. Buyer shall have effected a conversion of all of its outstanding convertible indebtedness and shall have no outstanding indebtedness other than pursuant to the Material Contracts listed on Part 7.9 of the Buyer Disclosure Schedule.

7.10 Cash Requirement. Buyer shall have no less than $15,000,000 of cash and cash equivalents as of the Closing as reflected in the Buyer Closing Financial Certificate.

ARTICLE 8

ADDITIONAL CONDITIONS PRECEDENT TO OBLIGATIONS OF BUYER

The obligations of Buyer and to effect the Contemplated Transactions and otherwise consummate the transactions to be consummated at the Closing are subject to the satisfaction or the written wavier by Buyer, at or prior to the Closing, of each of the following conditions:

8.1 Accuracy of Representations. The representations and warranties of Organovo and Merger Sub contained in this Agreement shall have been true and correct as of the date of this Agreement and shall be true and correct on and as of the Closing Date with the same force and effect as if made on the Closing Date except (A) in each case, or in the aggregate, where the failure to be true and correct would not reasonably be expected to have an Organovo Material Adverse Effect (except for the representations and warranties of Organovo set forth in **Section 3.3(a)** of the Agreement), (B) the representations and warranties of Organovo set forth in

Section 3.3(a) of the Agreement shall have been true and correct in all respects as of the date of the Agreement and shall be true and correct in all respects at and as of the Closing Date as if made on and as of such time except, other than as a result of a Willful Breach by Organovo, where the failure to be so accurate in all respects would not reasonably be expected to result in additional cost, expense or liability to Buyer, Organovo and their Affiliates, individually or in the aggregate, that is more than $250,000 or (C) for those representations and warranties which address matters only as of a particular date (which representations shall have been true and correct, subject to the qualifications as set forth in the preceding clause (A)-(B), as of such particular date) (it being understood that, for purposes of determining the accuracy of such representations and warranties, any update of or modification to the Organovo Disclosure Schedule made or purported to have been made after the date of this Agreement shall be disregarded).

8.2 Performance of Covenants. All of the covenants and obligations in this Agreement that either Organovo or Merger Sub is required to comply with or to perform at or prior to the Closing shall have been complied with and performed in all material respects.

8.3 Documents. Buyer shall have received the following documents, each of which shall be in full force and effect:

(a) a certificate executed by the Chief Executive Officer and Chief Financial Officer of Organovo confirming that the conditions set forth in **Sections 8.1**, **8.2**, **8.4**, and **8.5**, have been duly satisfied;

(b) certificates of good standing of Organovo and Merger Sub in its jurisdiction of organization and the various foreign jurisdictions in which it is qualified, certified charter documents, certificates as to the incumbency of officers and the adoption of resolutions of its board of directors authorizing the execution of this Agreement and the consummation of the Contemplated Transactions to be performed by Organovo and Merger Sub hereunder;

(c) the Organovo Closing Financial Certificate, which certificate shall be accompanied by such supporting documentation, information and calculations as are reasonably requested by Buyer to verify and determine the information contained therein; and

(d) executed severance agreements consistent with the Organovo's Severance and Change in Control Plan and written resignations in forms reasonably satisfactory to Buyer, dated as of the Closing Date and effective as of the Closing executed by the officers and directors of Organovo who are not to continue as officers or directors of Organovo pursuant to **Section 5.14** hereof.

8.4 Board of Directors. Organovo shall have caused the Board of Directors of Organovo to be constituted as set forth in **Section 5.14** of this Agreement effective as of the Effective Time.

8.5 Organovo Net Cash. The Organovo Net Cash calculation shall be finally determined in accordance with the terms of this Agreement.

8.6 Organovo Lock-Up Agreements. The Organovo Lock-up Agreements will continue to be in full force and effect as of immediately following the Effective Time.

8.7 Termination of 401(k). Duly authorized and approved resolutions of Organovo's Board of Directors (or other relevant committee thereof or governing body) authorizing the termination of Organovo's 401(k) Plan and each other plan required to be terminated pursuant to Section 5.6, effective as of not later than the date immediately prior to the Closing Date.

8.8 No Organovo Material Adverse Effect. Since the date of this Agreement, there shall not have occurred any Organovo Material Adverse Effect that is continuing.

8.9 Tax Opinion. Buyer shall have received (i) a written opinion from Cooley, counsel to Buyer (or if Cooley is unable to issue such an opinion, of another nationally recognized law firm proposed by Organovo that is reasonably acceptable to Buyer ("***Buyer's Replacement Counsel***")), dated the Closing Date, based on the facts, representations, assumptions and exclusions set forth or described in such opinion, for United States federal income Tax purposes, and substantially in the form set forth in **Section 8.9** of the Buyer Disclosure Schedule to the effect that, the Merger will qualify as a "reorganization" under the provisions of Section 368(a) of the Code and the Treasury Regulations promulgated thereunder (the "***Buyer Tax Opinion***") and (ii) a copy of the Organovo Tax Opinion. In rendering the Buyer Tax Opinion, Cooley (or Buyer's Replacement Counsel, if applicable) shall be entitled to rely upon customary assumptions, representations, warranties and covenants reasonably satisfactory to it, including the representations set forth in the certificates of officers of Organovo and Buyer, in substantially the forms set forth in Section 5.11(c) of the Organovo Disclosure Schedule and Section 5.11(c) of Buyer Disclosure Schedule.

8.10 Dissolution of Subsidiaries. Organovo shall have caused the dissolution of all Organovo Subsidiaries concurrent with or prior to the Closing.

ARTICLE 9

TERMINATION

9.1 Termination. This Agreement may be terminated prior to the Effective Time (whether before or after approval of the Organovo Stockholder Proposals by the Required Organovo Stockholder Vote, unless otherwise specified below):

(a) by mutual written consent duly authorized by the Boards of Directors of Organovo and Buyer;

(b) by either Organovo or Buyer if the Contemplated Transactions shall not have been consummated by the date that is six (6) months after the date hereof (subject to possible extension as provided in this **Section 9.1(b)**, the "***End Date***"); *provided*, *however*, that the right to terminate this Agreement under this **Section 9.1(b)** shall not be available to Buyer, on the one hand, or to Organovo and Merger Sub, on the other hand, if such Party's action or failure to act has been a principal cause of the failure of the Contemplated Transactions to occur on or before the End Date and such action or failure to act constitutes a breach of this Agreement; and *provided*, *further*, that, in the event that the SEC has not declared effective under the Securities Act the Form S-4 Registration Statement by the date which is sixty (60) days prior to the End Date, then either Buyer or Organovo shall be entitled to extend the End Date for an additional sixty (60) days;

(c) by either Organovo or Buyer if a court of competent jurisdiction or other Governmental Body shall have issued a final and nonappealable order, decree or ruling, or shall have taken any other action, having the effect of permanently restraining, enjoining or otherwise prohibiting the Contemplated Transactions;

(d) by either Organovo or Buyer if (i) the Organovo Stockholders' Meeting (including any adjournments and postponements thereof) shall have been held and completed and Organovo's stockholders shall have taken a final vote on the Organovo Stockholder Proposals and (ii) the Organovo Stockholder Proposals shall not have been approved at the Organovo Stockholders' Meeting (or any adjournment or postponement thereof) by the Required Organovo Stockholder Vote; *provided*, *however*, that the right to terminate this Agreement under this **Section 9.1(e)** shall not be available to Organovo where the failure to obtain the Required Organovo Stockholder Vote shall have been caused by the action or failure to act of Organovo and such action or failure to act constitutes a material breach by Organovo of this Agreement;

(e) by Buyer (at any time prior to the approval of the Organovo Stockholder Proposals by the Required Organovo Stockholder Vote) if an Organovo Triggering Event shall have occurred;

(f) by Organovo (at any time prior to the approval of the Merger by the Required Buyer Stockholder Vote) if a Buyer Triggering Event shall have occurred;

(g) by Buyer, upon a breach of any representation, warranty, covenant or agreement on the part of Organovo or Merger Sub set forth in this Agreement, or if any representation or warranty of Organovo or Merger Sub shall have become inaccurate, in either case such that the conditions set forth in **Section 8.1** or **Section 8.2** would not be satisfied as of the time of such breach or as of the time such representation or warranty shall have become inaccurate, provided, that the Buyer is not then in material breach of any representation, warranty, covenant or agreement under this Agreement so as to cause any of the conditions under Section 7.1 or 7.2 not to be satisfied; provided, further, that if such inaccuracy in representations and warranties or breach by Organovo or Merger Sub is curable by Organovo or Merger Sub, then this Agreement shall not terminate pursuant to this **Section 9.1(g)** as a result of such particular breach or inaccuracy until the earlier of (i) the expiration of a thirty (30) day period commencing upon delivery of written notice from Buyer to Organovo or Merger Sub of such breach or inaccuracy and of its intention to terminate pursuant to this Section 9.1(g) and (ii) Organovo or Merger Sub (as applicable) ceasing to exercise commercially reasonable efforts to cure such breach after the notice contemplated in clause (i) (it being understood that this Agreement shall not terminate pursuant to this **Section 9.1(g)** as a result of such particular breach or inaccuracy if such breach by Organovo or Merger Sub is cured prior to such termination becoming effective);

(h) by Organovo, upon a breach of any representation, warranty, covenant or agreement on the part of Buyer set forth in this Agreement, or if any representation or warranty of Buyer shall have become inaccurate, in either case such that the conditions set forth in **Section 7.1** or **Section 7.2** would not be satisfied as of the time of such breach or as of the time such representation or warranty shall have become inaccurate, provided, that Organovo is not then in material breach of any representation, warranty, covenant or agreement under this Agreement so as to cause any of the conditions under Section 8.1 or 8.2 not to be satisfied; provided, further, that if such inaccuracy in representations and warranties or breach by Buyer is curable by Buyer then this Agreement shall not terminate pursuant to this **Section 9.1(h)** as a result of such particular breach or inaccuracy until the earlier of (i) the expiration of a thirty (30) day period commencing upon delivery of written notice from Organovo to Buyer of such breach or inaccuracy and of its intention to terminate pursuant to this Section 9.1(h) and (ii) Buyer ceasing to exercise commercially reasonable efforts to cure such breach after the notice contemplated in clause (i) above (it being understood that this Agreement shall not terminate pursuant to this **Section 9.1(h)** as a result of such particular breach or inaccuracy if such breach by Buyer is cured prior to such termination becoming effective);

(i) by either Organovo or Buyer if (i) Buyer's stockholders do not adopt and approve this Agreement and the Merger by the Required Buyer Stockholder Vote within ten (10) Business Days after the S-4 Registration Statement shall have been declared effective under the Securities Act; provided, however, that the right to terminate this Agreement under this Section 9.1(i) shall not be available to Buyer where the failure to obtain the Required Buyer Stockholder Vote shall have been caused by the action or failure to act of Buyer and such action or failure to act constitutes a material breach by Buyer of this Agreement;

(j) by Organovo, at any time prior to the approval of the Organovo Stockholder Proposals by the Required Organovo Stockholder Vote and following compliance with all of the requirements set forth in the proviso to this **Section 9.1(j)**, upon Organovo entering into a definitive agreement that provides for the consummation of a transaction that satisfies the requirements of the definition of a Superior Offer (an "***Organovo Permitted Alternative Agreement***"); *provided*, *however*, that Organovo shall not enter into any Organovo Permitted Alternative Agreement unless: (i) Buyer shall have received written notice from Organovo confirming that Organovo intends to enter into such Organovo Permitted Alternative Agreement ("***Organovo Alternative Agreement Notice***") at least five (5) Business Days in advance, with such notice describing in reasonable detail the reasons for such intention and specifying the material terms and conditions of such Organovo Permitted Alternative Agreement, including the identity of the counterparty (and attaching the most current and complete version of any written agreement or other documents reflecting the material terms relating thereto), (ii) Organovo

shall have complied with its obligations under **Section 4.5** with respect to such Superior Offer, (iii) if requested by Buyer, Organovo shall, during such five (5) Business Day period, negotiate with Buyer in good faith to make such adjustments to the terms and conditions of this Agreement so that such Superior Offer no longer constitutes a Superior Offer, (iv) the Organovo Board of Directors shall have determined in good faith, based on such matters as it deems relevant following consultation with its outside legal counsel, that (1) the subject transaction of such Organovo Permitted Alternative Agreement satisfies the requirements of the definition of a Superior Offer and (2) the failure to enter into such Organovo Permitted Alternative Agreement, in light of such Superior Offer, would constitute a breach of its fiduciary duties under applicable Legal Requirements, and (v) Organovo shall concurrently pay to Buyer the Buyer Termination Fee in accordance with **Section 9.3(b)**. The requirements and provisions of this **Section 9.1(j)** shall also apply in the event of any material change to the terms of any such Organovo Permitted Alternative Agreement and each such material change shall require a new Organovo Alternative Agreement Notice, except that the references to five (5) Business Days shall be deemed to be three (3) Business Days; or

(k) by Buyer, at any time prior to the approval of the Merger by the Required Buyer Stockholder Vote and following compliance with all of the requirements set forth in the proviso to this **Section 9.1(k)**, upon Buyer entering into a definitive agreement that provides for the consummation of a transaction that satisfies the requirements of the definition of a Superior Offer (a "***Buyer Permitted Alternative Agreement***"); *provided*, *however*, that Buyer shall not enter into any Buyer Permitted Alternative Agreement unless: (i) Organovo shall have received written notice from Buyer confirming that Buyer intends to enter into such Buyer Permitted Alternative Agreement ("***Buyer Alternative Agreement Notice***") at least five (5) Business Days in advance, with such notice describing in reasonable detail the reasons for such intention and specifying the material terms and conditions of such Buyer Permitted Alternative Agreement, including the identity of the counterparty (and attaching the most current and complete version of any written agreement or other documents reflecting the material terms relating thereto), (ii) Buyer shall have complied with its obligations under **Section 4.5** with respect to such Superior Offer, (iii) if requested by Organovo, Buyer shall, during such five (5) Business Day period, negotiate with Organovo in good faith to make such adjustments to the terms and conditions of this Agreement so that such Superior Offer no longer constitutes a Superior Offer, (iv) the Buyer Board of Directors shall have determined in good faith, based on such matters as it deems relevant following consultation with its outside legal counsel, that (1) the subject transaction of such Buyer Permitted Alternative Agreement satisfies the requirements of the definition of a Superior Offer and (2) the failure to enter into such Organovo Permitted Alternative Agreement, in light of such Superior Offer, would constitute a breach of its fiduciary duties under applicable Legal Requirements, and (v) Buyer shall concurrently pay to Organovo the Organovo Termination Fee in accordance with **Section 9.3(c)**. The requirements and provisions of this **Section 9.1(k)** shall also apply in the event of any material change to the terms of any such Buyer Permitted Alternative Agreement and each such material change shall require a new Buyer Alternative Agreement Notice, except that the references to five (5) Business Days shall be deemed to be three (3) Business Days.

The Party desiring to terminate this Agreement pursuant to this **Section 9.1** (other than pursuant to **Section 9.1(a)**) shall give a notice of such termination to the other Party specifying the provisions hereof pursuant to which such termination is made and the basis therefor described in reasonable detail.

9.2 Effect of Termination. In the event of the termination of this Agreement as provided in **Section 9.1**, this Agreement shall be of no further force or effect; *provided*, *however*, that (i) **Section 5.9**, this **Section 9.2**, S**ection 9.3**, and **Section 10** and the Confidentiality Agreement shall survive the termination of this Agreement and shall remain in full force and effect, and (ii) the termination of this Agreement shall not relieve any Party for its fraud or from any liability for any Willful Breach of any representation, warranty, covenant, obligation or other provision contained in this Agreement. "***Willful Breach***" means a deliberate act or deliberate failure to act, taken with the actual knowledge that such act or failure to act would result in or constitute a material breach of this Agreement.

9.3 Expenses; Termination Fees.

(a) Except as set forth in this **Section 9.3**, all fees and expenses incurred in connection with this Agreement and the Contemplated Transactions shall be paid by the Party incurring such expenses, whether or not the Contemplated Transactions are consummated; *provided*, that Buyer and Organovo shall share equally all fees and expenses in relation to (i) the printing (e.g., paid to a financial printer) and filing with the SEC of the Form S-4 Registration Statement (including any financial statements and exhibits) and any amendments or supplements thereto and (ii) the filing and application fees payable to Nasdaq in connection with the Nasdaq Listing Application and the listing of the Organovo Common Stock to be issued in the Merger on Nasdaq.

(b) Organovo shall pay to Buyer via wire transfer of same-day funds, within two (2) Business Days after termination (or, if applicable, upon such earlier entry into a definitive agreement and/or consummation of a Subsequent Transaction), (x) a nonrefundable fee in an amount equal to $1,000,000 and (y) the Third Party Expenses incurred by Buyer (pursuant to which Buyer shall provide Organovo true and correct copies of reasonable documentation supporting such Third Party Expenses) in amount not to exceed $300,000 together with any amount payable pursuant to **Section 9.3(d)** (collectively, the "***Buyer Termination Fee***"):

(i) if this Agreement is terminated by Buyer pursuant to **Section 9.1(e)**;

(ii) if this Agreement is terminated by Organovo pursuant to **Section 9.1(j)**; provided, however, that in such event, the references to "$1,000,000" and "$300,000" in this **Section 9.1(b)** shall be treated as references to "$2,000,000" and "$500,000", respectively, and the timing of such payments shall be made in accordance with the terms of **Section 9.1(j)**; or

(iii) if this Agreement is terminated by Organovo or Buyer pursuant to **Section 9.1(b), Section 9.1(d)** or **Section 9.1(g)** and (x) an Acquisition Proposal with respect to Organovo shall have been publicly announced, disclosed or otherwise communicated to Organovo's Board of Directors prior to such termination and (y) within twelve (12) months after the date of such termination, Organovo enters into a definitive agreement with respect to a Subsequent Transaction that is subsequently consummated or consummates a Subsequent Transaction.

(c) Buyer shall pay to Organovo via wire transfer of same-day funds, within two (2) Business Days after termination (or, if applicable, upon such earlier entry into a definitive agreement and/or consummation of a Subsequent Transaction), (x) a nonrefundable fee in an amount equal to $1,000,000 and (y) the Third Party Expenses incurred by Organovo (pursuant to which Organovo shall provide Buyer true and correct copies of reasonable documentation supporting such Third Party Expenses) in amount not to exceed $300,000 together with any amount payable pursuant to **Section 9.3(e)** (collectively, the "***Organovo Termination Fee***"):

(i) if this Agreement is terminated by Organovo pursuant to **Section 9.1(f)**;

(ii) if this Agreement is terminated by Buyer pursuant to **Section 9.1(k)**; provided, however, that in such event, the references to "$1,000,000" and "$300,000" in this **Section 9.1(c)** shall be treated as references to "$2,000,000" and "$500,000", respectively, and the timing of such payments shall be made in accordance with the terms of **Section 9.1(k)**; or

(iii) if this Agreement is terminated by Organovo or Buyer pursuant to **Section 9.1(b)**, **Section 9.1(h)** or **Section 9.1(i)** and (x) an Acquisition Proposal with respect to Buyer shall have been publicly announced, disclosed or otherwise communicated to Buyer's Board of Directors prior to such termination and (y) within twelve (12) months after the date of such termination, Buyer enters into a definitive agreement with respect to a Subsequent Transaction that is subsequently consummated or consummates a Subsequent Transaction.

(d) (i) If this Agreement is terminated by Buyer pursuant to **Section 9.1(d)** or **Section 9.1(g)**, (ii) if this Agreement is terminated by Organovo pursuant to **Section 9.1(d)**, or (iii) in the event of a failure of Buyer to consummate the transactions solely as a result of an Organovo Material Adverse Effect as set forth in **Section 8.5** (*provided*, that at such time all of the other conditions precedent to Organovo's obligation to close set forth in **Sections 6** and 7 of this Agreement have been satisfied by Buyer, are capable of being satisfied by Buyer or have been waived by Organovo), then Organovo shall reimburse Buyer for all Third Party Expenses incurred by Buyer, up to a maximum of $300,000 by wire transfer of same-day funds within two (2) Business Days following the date on which Buyer submits to Organovo true and correct copies of reasonable documentation supporting such Third Party Expenses.

(e) (i) If this Agreement is terminated by Organovo pursuant to **Section 9.1(h)** or **Section 9.1(i)**, (ii) if this Agreement is terminated by Buyer pursuant to **Section 9.1(i)**, or (iii) in the event of a failure of Organovo to consummate the transactions at the Closing solely as a result of a Buyer Material Adverse Effect as set forth in **Section 7.6** (*provided*, that at such time all of the other conditions precedent to Buyer's obligation to close set forth in **Articles 6** and **8** of this Agreement have been satisfied by Organovo, are capable of being satisfied by Organovo or have been waived by Buyer), then Buyer shall reimburse Organovo for all Third Party Expenses incurred by Organovo up to a maximum of $300,000, by wire transfer of same-day funds within two (2) Business Days following the date on which Organovo submits to Buyer true and correct copies of reasonable documentation supporting such Third Party Expenses.

(f) If either Party fails to pay when due any amount payable by such Party under **Section 9.3(a), (b)**, **(c)**, **(d)** or **(e)**, then (i) such Party shall reimburse the other Party for reasonable costs and expenses (including reasonable fees and disbursements of counsel) incurred in connection with the collection of such overdue amount and the enforcement by the other Party of its rights under this **Section 9.3**, and (ii) such Party shall pay to the other Party interest on such overdue amount (for the period commencing as of the date such overdue amount was originally required to be paid and ending on the date such overdue amount is actually paid to the other Party in full) at a rate per annum equal to the "prime rate" (as announced by Bank of America or any successor thereto) in effect on the date such overdue amount was originally required to be paid.

(g) Except for any liability or damage for fraud or Willful Breach as provided in Section 9.2, the Parties agree that the payment of the fees and expenses set forth in this Section 9.3, shall be the sole and exclusive remedy of each Party following a termination of this Agreement under the circumstances described in this Section 9.3, it being understood that in no event shall either Organovo or Buyer be required to pay fees or damages payable pursuant to this Section 9.3 on more than one occasion. Subject to any liability or damage for fraud or Willful Breach as provided in Section 9.2, the payment of the fees and expenses set forth in this Section **9.3**, and the provisions of **Section 10.11**, each of the Parties and their respective Affiliates shall have no liability, shall not be entitled to bring or maintain any other claim, action or proceeding against the other, shall be precluded from any other remedy against the other, at law or in equity or otherwise, and shall not seek to obtain any recovery, judgment or damages of any kind against the other (or any partner, member, stockholder, director, officer, employee, Subsidiary, affiliate, agent or other representative of such Party) in connection with or arising out of the termination of this Agreement, any breach by any Party giving rise to such termination or the failure of the Contemplated Transactions to be consummated. Each of the Parties acknowledges that (i) the agreements contained in this **Section 9.3** are an integral part of the Contemplated Transactions, (ii) without these agreements, the Parties would not enter into this Agreement and (iii) any amount payable pursuant to this **Section 9.3** is not a penalty, but rather is liquidated damages in a reasonable amount that will compensate the Parties in the circumstances in which such amount is payable.

ARTICLE 10

MISCELLANEOUS PROVISIONS

10.1 Non-Survival of Representations and Warranties. The representations and warranties of Buyer, Merger Sub and Organovo contained in this Agreement or any certificate or instrument delivered pursuant

to this Agreement shall terminate at the Effective Time, and only the covenants that by their terms survive the Effective Time and this **Article 10** shall survive the Effective Time.

10.2 Amendment. This Agreement may be amended with the approval of the respective Boards of Directors of Buyer, Merger Sub and Organovo at any time (whether before or after the approval of the Contemplated Transactions or issuance of shares of Organovo Common Stock in the Contemplated Transactions); *provided*, *however*, that after any such adoption and approval of this Agreement by Organovo's stockholders, no amendment shall be made which by law requires further approval of the Organovo stockholders without the further approval of such stockholders. This Agreement may not be amended except by an instrument in writing signed on behalf of each of Buyer, Merger Sub and Organovo.

10.3 Waiver.

(a) No failure on the part of any Party to exercise any power, right, privilege or remedy under this Agreement, and no delay on the part of any Party in exercising any power, right, privilege or remedy under this Agreement, shall operate as a waiver of such power, right, privilege or remedy; and no single or partial exercise of any such power, right, privilege or remedy shall preclude any other or further exercise thereof or of any other power, right, privilege or remedy.

(b) Any provision hereof may be waived (or the time for performance extended) by the waiving Party solely on such Party's own behalf, without the consent of any other Party. No Party shall be deemed to have waived any claim arising out of this Agreement, or any power, right, privilege or remedy under this Agreement, unless the waiver of such claim, power, right, privilege or remedy is expressly set forth in a written instrument duly executed and delivered on behalf of such Party; and any such waiver shall not be applicable or have any effect except in the specific instance in which it is given.

10.4 Entire Agreement; Counterparts; Exchanges by Facsimile. This Agreement and the other agreements referred to in this Agreement constitute the entire agreement and supersede all prior agreements and understandings, both written and oral, among or between any of the Parties with respect to the subject matter hereof and thereof; *provided*, *however*, that the Confidentiality Agreement shall not be superseded and shall remain in full force and effect in accordance with its terms. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument. The exchange of a fully executed Agreement (in counterparts or otherwise) by all Parties by facsimile or electronic transmission in .PDF format shall be sufficient to bind the Parties to the terms and conditions of this Agreement.

10.5 Applicable Law; Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of laws. In any action or suit between any of the Parties arising out of or relating to this Agreement or any of the Contemplated Transactions: (a) each of the parties (i) irrevocably submits itself to the exclusive jurisdiction of the Court of Chancery of the State of Delaware or, to the extent such court does not have jurisdiction, the United States District Court of the District of Delaware, as well as to the jurisdiction of all courts to which an appeal may be taken from such courts, in any suit, action or proceeding arising out of or relating to this Agreement or any of the transactions contemplated herein, (b) agrees that every such suit, action or proceeding shall be brought, heard and determined exclusively in such court, (c) agrees that it shall not attempt to deny or defeat such personal jurisdiction by motion or other request for leave from such court, (d) agrees not to bring any suit, action or proceeding arising out of or relating to this Agreement or the Contemplated Transactions in any other court, and (e) waives any defense of inconvenient forum to the maintenance of any suit, action or proceeding so brought.

EACH PARTY ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY WHICH MAY ARISE UNDER THIS AGREEMENT OR THE DOCUMENTS RELATED HERETO IS LIKELY TO

INVOLVE COMPLICATED AND DIFFICULT ISSUES, AND THEREFORE EACH SUCH PARTY HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT SUCH PARTY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY, INCLUDING ANY CONTROVERSY INVOLVING ANY REPRESENTATIVE OF PARENT OR THE COMPANY UNDER THIS AGREEMENT. EACH PARTY CERTIFIES AND ACKNOWLEDGES THAT (i) NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER, (ii) SUCH PARTY UNDERSTANDS AND HAS CONSIDERED THE IMPLICATIONS OF THIS WAIVER, (iii) SUCH PARTY MAKES THIS WAIVER VOLUNTARILY, AND (iv) SUCH PARTY HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 10.5.

10.6 Attorneys' Fees. In any action at law or suit in equity to enforce this Agreement or the rights of any of the parties under this Agreement, the prevailing Party (as determined by a court of competent jurisdiction) in such action or suit shall be entitled to receive a reasonable sum for its attorneys' fees and all other reasonable costs and expenses incurred in such action or suit.

10.7 Assignability; No Third Party Beneficiaries. This Agreement shall be binding upon, and shall be enforceable by and inure solely to the benefit of, the Parties hereto and their respective successors and assigns; *provided, however*, that neither this Agreement nor any of a Party's rights or obligations hereunder may be assigned or delegated by such Party without the prior written consent of the other Parties, and any attempted assignment or delegation of this Agreement or any of such rights or obligations by such Party without the other Parties' prior written consent shall be void and of no effect. Nothing in this Agreement, express or implied, is intended to or shall confer upon any Person (other than the parties hereto and the D&O Indemnified Parties to the extent of their respective rights pursuant to **Section 5.7**) any right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

10.8 Notices. Any notice or other communication required or permitted to be delivered to any Party under this Agreement shall be in writing and shall be deemed properly delivered, given and received when delivered by hand, by registered mail, by courier or express delivery service, by facsimile to the address or facsimile telephone number or sent by electronic mail (notice deemed given on the date of receipt) prior to 6:00 p.m. New York City time, otherwise on the next succeeding Business Day, set forth beneath the name of such Party below (or to such other address, facsimile telephone number or electronic mail as such Party shall have specified in a written notice given to the other parties hereto):

if to Organovo or Merger Sub:

Organovo Holdings, Inc.

Email: Legal@organovo.com
Attention: Taylor Crouch, Chief Executive Officer

With a copy (which shall not constitute notice) to:

Gunderson Dettmer, LLP
3570 Carmel Mountain Rd., Suite 200
San Diego, California 92130
Telephone: (858) 436-8000
Fax: (877) 881-9192
Email: jthacker@gunder.com
Attention: Jeff Thacker

Email: aluh@gunder.com
Attention: Andrew Luh

if to Buyer:

with a copy (which shall not constitute notice) to:

Cooley LLP
500 Boylston St.
Boston, Massachusetts 02116
Telephone: 617-937-2319
Fax: 617-937-2400
Attention: Miguel J. Vega, Esq.
Email: mvega@cooley.com

10.9 Cooperation. Each Party agrees to cooperate fully with the other Parties and to execute and deliver such further documents, certificates, agreements and instruments and to take such other actions as may be reasonably requested by the other Party to evidence or reflect the Contemplated Transactions and to carry out the intent and purposes of this Agreement.

10.10 Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions of this Agreement or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction. If a final judgment of a court of competent jurisdiction declares that any term or provision of this Agreement is invalid or unenforceable, the Parties hereto agree that the court making such determination shall have the power to limit such term or provision, to delete specific words or phrases or to replace such term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and this Agreement shall be valid and enforceable as so modified. In the event such court does not exercise the power granted to it in the prior sentence, the Parties hereto agree to replace such invalid or unenforceable term or provision with a valid and enforceable term or provision that will achieve, to the extent possible, the economic, business and other purposes of such invalid or unenforceable term or provision.

10.11 Other Remedies; Specific Performance. Except as otherwise provided herein, any and all remedies herein expressly conferred upon a Party will be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such Party, and the exercise by a Party of any one remedy will not preclude the exercise of any other remedy. The Parties hereto agree that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the Parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof in any court of the United States or any state having jurisdiction, this being in addition to any other remedy to which they are entitled at law or in equity, and each of the Parties hereto waives any bond, surety or other security that might be required of any other Party with respect thereto.

10.12 Construction.

(a) For purposes of this Agreement, whenever the context requires: the singular number shall include the plural, and vice versa; the masculine gender shall include the feminine and neuter genders; the feminine gender shall include the masculine and neuter genders; and the neuter gender shall include masculine and feminine genders.

(b) The Parties hereto agree that any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be applied in the construction or interpretation of this Agreement.

(c) As used in this Agreement, the words “include” and “including,” and variations thereof, shall not be deemed to be terms of limitation, but rather shall be deemed to be followed by the words “without limitation.”

(d) Except as otherwise indicated, all references in this Agreement to “Sections,” “Exhibits” and “Schedules” are intended to refer to Sections of this Agreement and Exhibits and Schedules to this Agreement, respectively.

(e) The bold-faced headings contained in this Agreement are for convenience of reference only, shall not be deemed to be a part of this Agreement and shall not be referred to in connection with the construction or interpretation of this Agreement.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the date first above written.

ORGANOVO HOLDINGS, INC.

By: /s/ Taylor Crouch
Name: Taylor Crouch
Title: Chief Executive Officer

OPAL MERGER SUB, INC.

By: /s/ Taylor Crouch
Name: Taylor Crouch
Title: Chief Executive Officer

TARVEDA THERAPEUTICS, INC.

By: /s/ Andrew J. Fromkin
Name: Andrew J. Fromkin
Title: Chief Executive Officer

Schedules:

Schedule A	Persons Executing Organovo Stockholder Support Agreements
Schedule B	Persons Executing Buyer Stockholder Support Agreements and Lock-up Agreements
Schedule C	Investor Agreements

Exhibits:

Exhibit A	Definitions
Exhibit B	Form of Organovo Stockholder Support Agreement
Exhibit C	Form of Buyer Stockholder Support Agreement
Exhibit D	Form of Lock-up Agreement

EXHIBIT A

CERTAIN DEFINITIONS

For purposes of the Agreement (including this **Exhibit A**):

"***2008 Plan***" shall have the meaning set forth in **Section 3.3(b)**.

"***2012 Plan***" shall have the meaning set forth in **Section 3.3(b)**.

"***2019 Employment Tax Audit***" shall mean the employee classification audit of Organovo as described in that certain Employment Development Department Audit Letter issued on September 19, 2019, as further described in Schedule 3.9(a) of the Organovo Disclosure Schedule.

"***Acquisition Inquiry***" shall mean, with respect to a Party, an inquiry, indication of interest or request for nonpublic information (other than an inquiry, indication of interest or request for information made or submitted by Buyer, on the one hand, or Organovo, on the other hand, to the other Party) that would reasonably be expected to lead to an Acquisition Proposal with such Party.

"***Acquisition Proposal***" shall mean, with respect to a Party, any offer or proposal, whether written or oral (other than an offer or proposal made or submitted by or on behalf of Buyer or any of its Affiliates, on the one hand, or by or on behalf of Organovo or any of its Affiliates, on the other hand, to the other Party) contemplating or otherwise relating to any Acquisition Transaction with such Party.

"***Acquisition Transaction***" shall mean any transaction or series of transactions (other than an Approved Financing) involving:

- any merger, consolidation, amalgamation, share exchange, business combination, issuance of securities, acquisition of securities, reorganization, recapitalization, tender offer, exchange offer or other similar transaction: (i) in which a Party or any of its Subsidiaries is a constituent corporation; (ii) in which a Person or "group" (as defined in the Exchange Act and the rules promulgated thereunder) of Persons directly or indirectly acquires beneficial or record ownership of securities representing more than 15% of the outstanding securities of any class of voting securities of a Party or any of its Subsidiaries; or (iii) in which a Party or any of its Subsidiaries issues securities representing more than 15% of the outstanding securities of any class of voting securities of such Party or any of its Subsidiaries;
- any sale, lease, exchange, transfer, license, acquisition or disposition of any business or businesses or assets that constitute or account for 15% or more of the fair market value of the consolidated assets of a Party and its Subsidiaries, taken as a whole, other than an Organovo Asset Sale; or
- any liquidation or dissolution of a Party or any of its Subsidiaries.

"***Affiliates***" shall have the meaning for such term as used in Rule 145 under the Securities Act.

"***Agreement***" shall mean the Agreement and Plan of Merger and Reorganization to which this **Exhibit A** is attached, as it may be amended from time to time.

"***Allocation Certificate***" shall have the meaning set forth in **Section 7.3(e)**.

"***Approved Financing***" shall mean the issuance of Buyer Capital Stock for cash and all activities, transactions, agreements and filings with any Governmental Body in connection therewith, that may be consummated by Buyer prior to the Closing for aggregate proceeds necessary to allow Buyer to satisfy **Section 7.10** hereof.

"***Business Day***" shall mean any day other than a day on which banks in the State of New York are authorized or obligated to be closed.

"***Buyer***" shall have the meaning set forth in the Preamble.

"***Buyer Affiliate***" shall mean any Person that is (or at any relevant time was) under common control with Buyer within the meaning of Sections 414(b), (c), (m) and (o) of the Code, and the regulations issued thereunder.

"***Buyer Associate***" shall mean any current or former employee, independent contractor, officer or director of Buyer or any Buyer Affiliate.

"***Buyer Board Adverse Recommendation Change***" shall have the meaning set forth in **Section 5.2(c)**.

"***Buyer Board of Directors***" shall mean the Board of Directors of Buyer.

"***Buyer Board Recommendation***" shall have the meaning set forth in **Section 5.2(b)**.

"***Buyer Capital Stock***" shall mean the Buyer Common Stock together with the Buyer Preferred Stock.

"***Buyer Closing Balance Sheet***" shall mean the unaudited consolidated balance sheet of Buyer and its consolidated Subsidiaries as of the Closing.

"Buyer Closing Financial Certificate" means a certificate executed by the Chief Executive Officer of Buyer, on behalf of Buyer and not in his or her personal capacity, dated as of the Closing Date, certifying the accuracy of the Buyer Closing Balance Sheet. The Buyer Closing Financial Certificate shall include a representation of Buyer, certified by the Chief Executive Officer of Buyer, that such certificate includes an accurate and correct accounting and calculation of Buyer's cash and cash equivalents as of the Closing Date.

"***Buyer Common Stock***" shall mean the common stock, $0.0001 par value, of Buyer.

"***Buyer Confidential Information***" shall have the meaning set forth in **Section 2.8(h)**.

"***Buyer Contract***" shall mean any Contract: (a) to which Buyer or any of its Subsidiaries is a Party; (b) by which Buyer or any Buyer Subsidiary or any Buyer IP Rights or any other asset of Buyer or its Subsidiaries is or may become bound or under which Buyer or any Buyer Subsidiary has, or may become subject to, any obligation; or (c) under which Buyer or Buyer Subsidiary has or may acquire any right or interest.

"***Buyer Debt***" means with respect to Buyer and the Buyer Subsidiaries, any of the following and, in each case, including all accrued and unpaid interest thereon and any premiums, prepayment penalties, breakage costs and other fees and expenses arising as a result of the payment of any such amount owed: (i) any indebtedness evidenced by any note, bond, debenture or other debt security, (ii) any indebtedness to any lender or creditor under credit facilities of Buyer, (iii) any indebtedness for the deferred purchase price of property with respect to which Buyer is liable, contingently or otherwise, as obligor or otherwise, (iv) any drawn amounts under letter of credit arrangements, (v) any cash overdrafts, (vi) any capitalized leases, (vii) any indebtedness under any financial instrument classified as debt, (viii) any notes payable to any of Buyer's equity holders or Buyer's vendors, customers or third parties, and (ix) any Liability of other Persons of the type described in the preceding clauses (i)-(viii) that Buyer has guaranteed, that is recourse to Buyer or any of its assets, or that is otherwise the legal Liability of Buyer. Notwithstanding the foregoing, in no case shall Buyer Debt include any costs or expenses, including attorney's fees or settlement costs, incurred in connection with (i) any potential or actual security holder litigation arising or resulting from this Agreement, the Merger or the Contemplated Transactions and that may be brought in connection with or on behalf of any Buyer security holder's interest in Buyer Capital Stock (including all amounts paid or payable up to the retention amount of any insurance policy that is or may cover such costs or expenses and amounts not covered by any such insurance policy) or (ii) any Dissenting Shares.

"***Buyer Disclosure Schedule***" shall have the meaning set forth in **Article 2**.

"***Buyer Employee Plan***" shall have the meaning set forth in **Section 2.13(a)**.

"***Buyer Estimated Cash and Debt Statement***" shall have the meaning set forth in **Section 5.18(c)**.

"***Buyer Financials***" shall have the meaning set forth in **Section 2.4(a)**.

Buyer IP Rights" shall mean (A) any and all Intellectual Property used in the conduct of the business of Buyer; and (B) any and all Buyer-Owned IP Rights.

"***Buyer Intervening Event***" shall have the meaning set forth in **Section 5.2(d)**.

"***Buyer Intervening Event Recommendation Determination Notice***" shall have the meaning set forth in **Section 5.2(d)**.

"***Buyer Lock-up Agreements***" shall have the meaning set forth in the Recitals.

"***Buyer Material Adverse Effect***" shall mean any Effect that, considered together with all other Effects that have occurred prior to the date of determination of the occurrence of the Buyer Material Adverse Effect, is or would reasonably be expected to be materially adverse to: (a) the business, condition (financial or otherwise), assets (including Intellectual Property), operations or financial performance of Buyer and its Subsidiaries taken as a whole; or (b) the ability of Buyer to timely consummate the Contemplated Transactions or to perform any of its covenants or obligations under the Agreement in all material respects; *provided*, *however*, that Effects from the following shall not be deemed to constitute (nor shall Effects from any of the following be taken into account in determining whether there has occurred) a Buyer Material Adverse Effect: (i) conditions generally affecting the industries in which Buyer and its Subsidiaries participate or the United States or global economy or capital markets as a whole, to the extent that such conditions do not have a materially disproportionate impact on Buyer and its Subsidiaries taken as a whole; (ii) any failure by Buyer or any of its Subsidiaries to meet internal projections or forecasts or third party revenue or earnings predictions for any period ending on or after the date of this Agreement (it being understood, however, that any Effect causing or contributing to any such failure to meet projections or predictions may constitute a Buyer Material Adverse Effect and may be taken into account in determining whether a Buyer Material Adverse Effect has occurred); (iii) the execution, delivery, announcement or performance of the obligations under this Agreement or the announcement, pendency or anticipated consummation of the Contemplated Transactions; (iv) the resignation or termination of any officer or director; (v) any natural disaster or any acts of terrorism, sabotage, military action or war (whether or not declared) or any escalation or worsening thereof; or (vi) any changes (after the date of this Agreement) in GAAP or applicable Legal Requirements.

"***Buyer Material Contract***" shall have the meaning set forth in **Section 2.9**.

"***Buyer Options***" shall mean options to purchase shares of Buyer Common Stock issued or granted by Buyer.

"***Buyer-Owned IP Rights***" shall mean any and all Intellectual Property owned (or purported to be owned) by Buyer.

"***Buyer Permits***" shall have the meaning set forth in **Section 2.11(b)**.

"***Buyer Permitted Alternative Agreement***" shall have the meaning set forth in **Section 9.1(k)**.

"***Buyer Preferred Stock***" shall mean the Series A Preferred Stock, $0.0001 par value, Series B Preferred Stock, $0.0001 par value, Series B-1 Preferred Stock, $0.0001 par value, Series C Preferred Stock, $0.0001 par value, Series D Preferred Stock, $0.0001 par value, Series 1 Preferred Stock, $0.0001 par value, and Series CS Preferred Stock, $0.0001 par value, of Buyer.

"***Buyer Product Candidates***" shall have the meaning set forth in **Section 2.11(d)**.

"***Buyer Recommendation Determination Notice***" shall have the meaning set forth in **Section 5.2(c)**.

"***Buyer Registered Intellectual Property***" shall mean all United States, international and foreign: (A) patents and patent applications (including provisional applications), (B) registered trademarks, applications to register trademarks, intent-to-use applications, or other registrations or applications related to trademarks, (C) registered Internet domain names, (D) registered copyrights and applications for copyright registration and (E) any other Intellectual Property that is the subject of an application, certificate, filing, registration or other document issued, filed with, or recorded by any governmental authority owned by, registered or filed in the name of, Buyer.

"***Buyer Regulatory Permits***" shall have the meaning set forth in **Section 2.11(d)**.

"***Buyer Stock Certificate***" shall have the meaning set forth in **Section 1.6**.

"***Buyer Stockholder Support Agreements***" shall have the meaning set forth in the Recitals.

"***Buyer Subsidiaries***" shall have the meaning set forth in **Section 2.1(a)**.

"***Buyer Termination Fee***" shall have the meaning set forth in **Section 9.3(b)**.

A "***Buyer Triggering Event***" shall be deemed to have occurred if: (i) the Board of Directors of Buyer shall have failed to recommend that Buyer's stockholders vote to approve the Merger or shall for any reason have withdrawn or shall have modified in a manner adverse to Organovo the Buyer Board Recommendation, including pursuant to a Buyer Board Adverse Recommendation Change; (ii) the Board of Directors of Buyer shall have publicly approved, endorsed or recommended any Acquisition Proposal; or (iii) Buyer or any director, officer or agent of Buyer shall have breached the provisions set forth in Section 4.5 in any material respect.

"***Buyer Unaudited Interim Balance Sheet***" shall mean the unaudited consolidated balance sheet of Buyer and its consolidated Subsidiaries as of September 30, 2019, provided to Organovo prior to the date of this Agreement.

"***Buyer Valuation***" means $150,000,000, less any Buyer Debt (other than up to $10,000,000 in Buyer Debt under that certain credit facility with Oxford Finance.)

"***Buyer Warrants***" shall have the meaning set forth in **Section 2.3(c)**.

"***Capitalization Date***" shall have the meaning set forth in **Section 3.3(a)**.

"***Certificate of Merger***" shall have the meaning set forth in **Section 1.3**.

"***Certifications***" shall have the meaning set forth in **Section 3.4(a)**.

"***Closing***" shall have the meaning set forth in **Section 1.3**.

"***Closing Date***" shall have the meaning set forth in **Section 1.3**.

"***COBRA***" means the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended, as set forth in Section 4980B of the Code and Part 6 of Title I of ERISA.

"***Code***" shall mean the Internal Revenue Code of 1986, as amended.

"***Confidentiality Agreement***" shall mean the Confidentiality Agreement dated August 15, 2019, between Buyer and Organovo.

"***Consent***" shall mean any approval, consent, ratification, permission, waiver or authorization (including any Governmental Authorization).

"***Contemplated Transactions***" shall mean the Merger, Reverse Split and the other transactions and actions contemplated by the Agreement.

"***Contract***" shall, with respect to any Person, mean any written agreement, contract, subcontract, lease (whether real or personal property), mortgage, understanding, arrangement, instrument, note, option, warranty, purchase order, license, sublicense, insurance policy, benefit plan or legally binding commitment or undertaking of any nature that is currently in force and to which such Person is a party or by which such Person or any of its assets are bound or affected under applicable law.

"***Cooley***" shall have the meaning set forth in **Section 5.11(c)**.

"***Costs***" shall have the meaning set forth in **Section 5.7(a)**.

"***D&O Indemnified Parties***" shall have the meaning set forth in **Section 5.7(a)**.

"***DGCL***" shall mean the General Corporation Law of the State of Delaware.

"***Dissenting Shares***" shall have the meaning set forth in **Section 1.8(a)**.

"***Drug/Device Regulatory Agency***" shall have the meaning set forth in **Section 2.11(c)**.

"***EEOC***" shall have the meaning set forth in **Section 2.14(a)**.

"***Effect***" shall mean any effect, change, event, circumstance, or development.

"***Effective Time***" shall have the meaning set forth in **Section 1.3**.

"***Encumbrance***" shall mean any lien, pledge, hypothecation, charge, mortgage, security interest, encumbrance, claim, infringement, interference, option, right of first refusal, preemptive right, community property interest or restriction of any nature (including any restriction on the voting of any security, any restriction on the transfer of any security or other asset, any restriction on the receipt of any income derived from any asset, any restriction on the use of any asset and any restriction on the possession, exercise or transfer of any other attribute of ownership of any asset).

"***End Date***" shall have the meaning set forth in **Section 9.1(b)**.

"***Entity***" shall mean any corporation (including any non-profit corporation), partnership (including any general partnership, limited partnership or limited liability partnership), joint venture, estate, trust, company (including any company limited by shares, limited liability company or joint stock company), firm, society or other enterprise, association, organization or entity, and each of its successors.

"***Environmental Law***" means any federal, state, local or foreign Legal Requirement relating to pollution or protection of human health or the environment (including ambient air, surface water, ground water, land surface or subsurface strata), including any law or regulation relating to emissions, discharges, releases or threatened releases of Hazardous Materials, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials.

"***Equity Incentive Plan***" shall have the meaning set forth in **Section 2.3(b)**.

"***ERISA***" shall mean the Employee Retirement Income Security Act of 1974, as amended.

"***ESPP***" shall have the meaning set forth in **Section 3.3(b)**.

"***Exchange Act***" shall mean the Securities Exchange Act of 1934, as amended.

"***Exchange Agent***" shall have the meaning set forth in **Section 1.7(a)**.

"***Exchange Fund***" shall have the meaning set forth in **Section 1.7(a)**.

"***Exchange Ratio***" shall mean, subject to **Section 1.5(f)**, the quotient determined by dividing the Surviving Corporation Allocation Shares by the Buyer Outstanding Shares, where:

- "***Buyer Outstanding Shares***" means the total number of shares of Buyer Capital Stock outstanding immediately prior to the Effective Time expressed on a fully diluted and as-converted to Buyer Common Stock basis and assuming, without limitation, (i) the exercise of all Buyer Options and Buyer Warrants outstanding as of immediately prior to the Effective Time (whether or not in-the-money), (ii) the conversion of all of Buyer's outstanding convertible indebtedness and (iii) the issuance of shares of Buyer Capital Stock in respect of all other options, warrants or rights to receive such shares, including all shares of Buyer Capital Stock issuable as a dividend that have accrued as of the Effective Time, whether conditional or unconditional and including any options, warrants or rights triggered by or associated with the consummation of the Contemplated Transactions. For purposes of clarity, Buyer Outstanding Shares shall include any Buyer Capital Stock (including any securities convertible thereto) issued in connection with an Approved Financing but shall not include any shares available and reserved for future issuance under the Equity Incentive Plan or the New Tarveda Equity Plan.
- "***Organovo Allocation Percentage***" means the percentage determined by (i) dividing the Organovo Valuation by (ii) the sum of the Organovo Valuation plus the Buyer Valuation.
- "***Organovo Outstanding Shares***" means the total number of shares of Organovo Common Stock outstanding immediately prior to the Effective Time expressed on a fully diluted and as-converted to Organovo Common Stock basis, but assuming, without limitation, (i) the inclusion of all options, warrants or rights to receive such shares (whether or not in-the-money), whether conditional or unconditional and including any options, warrants or rights that accelerate upon or are triggered by or associated with the consummation of the Contemplated Transactions, (ii) the inclusion of all restricted stock units of Organovo, whether conditional or unconditional, (iii) the inclusion of the Warrants, and (iv) the inclusion of shares of Organovo Common Stock issued after the date of this Agreement and prior to the Closing pursuant to Organovo's at-the-market facility or otherwise. For purposes of clarity, Organovo Outstanding Shares shall not include any shares available and reserved for future issuance under the 2008 Plan, the 2012 Plan or the ESPP.
- "***Organovo Valuation***" means $50,000,000 less any Organovo Debt, provided however, that the Organovo Valuation shall be (i) increased on a dollar-for-dollar basis by the amount that Organovo Net Cash at Closing is greater than $22,000,000 and (ii) reduced on a dollar-for-dollar basis by the amount that Organovo Net Cash at Closing is less than $22,000,000.

- "***Surviving Corporation Allocation Shares***" means an amount equal to (i) the quotient determined by dividing the Organovo Outstanding Shares by the Organovo Allocation Percentage *less* (ii) the Organovo Outstanding Shares.

"***Existing Buyer D&O Policies***" shall have the meaning set forth in **Section 2.16(b)**.

"***Existing Organovo D&O Policies***" shall have the meaning set forth in **Section 3.14(b)**.

"***FDA***" shall have the meaning set forth in **Section 2.11(b)**.

"***FDCA***" shall have the meaning set forth in **Section 2.11(c)**.

"***Form S-4 Registration Statement***" shall mean the registration statement on Form S-4 to be filed with the SEC by Buyer registering the public offering and sale of Organovo Common Stock to some or all holders of Buyer Common Stock in the Contemplated Transactions, including all shares of Organovo Common Stock to be issued in exchange for all other shares of Buyer Common Stock in the Contemplated Transactions, as said registration statement may be amended prior to the time it is declared effective by the SEC.

"***GAAP***" shall have the meaning set forth in **Section 2.4(a)**.

"***Governmental Authority***" shall mean any court or tribunal, governmental, quasi-governmental or regulatory body, administrative agency or bureau, commission or authority or other body entitled to exercise similar powers or authority.

"***Governmental Authorization***" shall mean any: (a) permit, license, certificate, franchise, permission, variance, exceptions, orders, clearance, registration, qualification or authorization issued, granted, given or otherwise made available by or under the authority of any Governmental Body or pursuant to any Legal Requirement; or (b) right under any Contract with any Governmental Body.

"***Governmental Body***" shall mean any: (a) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (b) federal, state, local, municipal, foreign or other government; (c) governmental or quasi-Governmental Authority of any nature (including any governmental division, department, agency, commission, instrumentality, official, ministry, fund, foundation, center, organization, unit, body or Entity and any court or other tribunal, and for the avoidance of doubt, any Taxing authority); or (d) self-regulatory organization (including the Nasdaq Stock Market).

"***Gunderson***" shall mean Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP.

"***Hazardous Materials***" shall mean any pollutant, chemical, substance and any toxic, infectious, carcinogenic, reactive, corrosive, ignitable or flammable chemical, or chemical compound, or hazardous substance, material or waste, whether solid, liquid or gas, that is subject to regulation, control or remediation under any Environmental Law, including crude oil or any fraction thereof, and petroleum products or by-products.

"***Intellectual Property***" shall mean any and all industrial and intellectual property rights and all rights associated therewith, throughout the world, including all patents and applications therefor and all reissues, divisions, renewals, extensions, provisionals, continuations and continuations-in-part thereof, all inventions (whether patentable or not), all rights in invention disclosures, improvements, trade secrets, proprietary information, know how, technology, technical data, proprietary processes and formulae, algorithms, specifications, customer lists and supplier lists, all designs and any registrations and applications therefor, all trade names, logos, trade dress, trademarks and service marks, trademark and service mark registrations, trademark and service mark applications, and any and all goodwill associated with and symbolized by the

foregoing items, Internet domain name registrations, all copyrights, copyright registrations and applications therefor (including copyrights in computer software, source code, object code, firmware, development tools, files, records, data, schematics and reports), and all other rights corresponding thereto, all rights in databases and data collections, all moral rights of authors and inventors, however denominated, and any similar or equivalent rights to any of the foregoing..

"***Intervening Event***" shall have the meaning set forth in **Section 5.3(d).**

"***Investor Agreements***" shall have the meaning set forth in **Section 5.17**.

"***IRS***" shall mean the United States Internal Revenue Service.

"***Key Employee***" shall mean, with respect to Buyer or Organovo, an executive officer or any employee that reports directly to the Board of Directors or Chief Executive Officer or Chief Operating Officer.

"***Knowledge***" means actual knowledge of the Key Employees after reasonable inquiry of such Key Employee's personal files and of the direct reports of such Key Employee charged with administrative or operational responsibility for such matters.

"***Laws***" means applicable laws, statutes, by-laws, rules, regulations, orders, ordinances, protocols, codes, guidelines, treaties, policies, notices, directions, decrees, judgements, awards or requirements, in each case of any Governmental Authority.

"***Legal Proceeding***" shall mean any action, suit, litigation, arbitration, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding), hearing, inquiry, audit, examination or investigation commenced, brought, conducted or heard by or before, or otherwise involving, any court or other Governmental Body or any arbitrator or arbitration panel.

"***Legal Requirement***" shall mean any federal, state, foreign, material local or municipal or other treaty, law, statute, constitution, resolution, ordinance, code, edict, decree, rule, regulation, code, ordinance, ruling or other requirement having the force of law issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Body (or under the authority of the Nasdaq Stock Market or the Financial Industry Regulatory Authority).

"***Liability***" shall have the meaning set forth in **Section 2.10**.

"***Merger***" shall have the meaning set forth in the Recitals.

"***Merger Sub***" shall have the meaning set forth in the Preamble.

"***Multiemployer Plan***" shall have the meaning set forth in Section 2.13(c).

"***Multiple Employer Plan***" shall have the meaning set forth in Section 2.13(c).

"***Nasdaq Listing Application***" shall have the meaning set forth in **Section 5.10**.

"***New Tarveda Equity Plan***" means an equity incentive plan in a form reasonably acceptable to Organovo to be provided by Buyer to Organovo for submission to the Organovo stockholders for approval at the Organovo Stockholders' Meeting.

"***Ordinary Course of Business***" shall mean, in the case of each of Buyer and Organovo and for all periods, such actions taken in the ordinary course of its normal operations and consistent with its past practices, and for

periods following the date of this Agreement consistent with its operating plans delivered to the other Party; *provided, however*, that (i) the Ordinary Course of Business for Organovo shall also include activities, transactions, agreements and filings with any Governmental Body in connection with an Organovo Asset Sale, and other activities in connection with potentially winding down of all its historical clinical development programs and related operations and (ii) the Ordinary Course of Business for Buyer shall also include all activities, transactions, agreements and filings with any Governmental Body in connection with an Approved Financing.

"***Organovo***" shall have the meaning set forth in the Preamble.

"***Organovo Affiliate***" shall mean any Person that is (or at any relevant time was) under common control with Organovo within the meaning of Sections 414(b), (c), (m) and (o) of the Code, and the regulations issued thereunder.

"***Organovo Asset Sale***" shall have the meaning set forth in the **Section 5.20**. In no event will the sale of any newly issued or outstanding securities of Organovo be deemed an Organovo Asset Sale.

"***Organovo Associate***" shall mean any current or former employee, independent contractor, officer or director of Organovo or any Organovo Affiliate.

"***Organovo Board of Directors***" shall mean the board of directors of Organovo.

"***Organovo Board Adverse Recommendation Change***" shall have the meaning set forth in **Section 5.3(c)**.

"***Organovo Board Recommendation***" shall have the meaning set forth in **Section 5.3(b)**.

"***Organovo Capital Stock***" shall mean the Organovo Common Stock and the preferred stock of Organovo.

"***Organovo Closing Financial Certificate***" means a certificate executed by the Chief Executive Officer of Organovo, on behalf of Organovo and not in his personal capacity, dated as of the Closing Date, certifying (A) (i) an itemized list of each element of Organovo's consolidated current assets and (ii) an itemized list of each element of Organovo's consolidated total current liabilities, (B) the amount of Organovo Transaction Expenses incurred but unpaid as of the Closing Date (including an itemized list of each Organovo Transaction Expense and the Person to whom such expense is owed), (C) the amount of Organovo Debt as of the Closing Date (including an itemized list of each Organovo Debt and the Person to whom such Organovo Debt is owed) and (D) the amount of Organovo Net Cash as of the Closing Date. The Organovo Closing Financial Certificate shall include a representation of Organovo, certified by the Chief Executive Officer of Organovo, that such certificate includes an accurate and correct accounting and calculation of (i) all of the Organovo Transaction Expenses paid or payable at any time prior to, at or following the Closing Date, and (ii) all of the Organovo Debt outstanding as of the Closing Date.

"***Organovo Common Stock***" shall mean the Common Stock, $0.001 par value per share, of Organovo.

"***Organovo Confidential Information***" shall have the meaning set forth in **Section 3.6(h)**.

"***Organovo Contract***" shall mean any Contract: (a) to which Organovo or any of its Subsidiaries is a party; (b) by which Organovo or any of its Subsidiaries or any Organovo IP Rights or any other asset of Organovo or any of its Subsidiaries is or may become bound or under which Organovo has, or may become subject to, any obligation; or (c) under which Organovo or any of its Subsidiaries has or may acquire any right or interest.

"***Organovo Debt***" means with respect to Organovo and the Organovo Subsidiaries, any of the following and, in each case, including all accrued and unpaid interest thereon and any premiums, prepayment penalties,

breakage costs and other fees and expenses arising as a result of the payment of any such amount owed: (i) any indebtedness evidenced by any note, bond, debenture or other debt security, (ii) any indebtedness to any lender or creditor under credit facilities of Organovo, (iii) any indebtedness for the deferred purchase price of property with respect to which Organovo is liable, contingently or otherwise, as obligor or otherwise, (iv) any drawn amounts under letter of credit arrangements, (v) any cash overdrafts, (vi) any capitalized leases, (vii) any indebtedness under any financial instrument classified as debt, (viii) any notes payable to any of Organovo's equity holders or Organovo's vendors, customers or third parties, and (ix) any Liability of other Persons of the type described in the preceding clauses (i)-(viii) that Organovo has guaranteed, that is recourse to Organovo or any of its assets, or that is otherwise the legal Liability of Organovo. Notwithstanding the foregoing, in no case shall Organovo Debt include any costs or expenses, including attorney's fees or settlement costs, incurred in connection with (i) any potential or actual security holder litigation arising or resulting from this Agreement, the Merger or the Contemplated Transactions and that may be brought in connection with or on behalf of any Organovo security holder's interest in Organovo Capital Stock (including all amounts paid or payable up to the retention amount of any insurance policy that is or may cover such costs or expenses and amounts not covered by any such insurance policy) or (ii) any Dissenting Shares. For purposes of clarity, any liabilities or obligations that reduce the calculation of Organovo Net Cash as of the Closing Date shall not also be included in the definition of Organovo Debt as of the Closing Date.

"***Organovo Disclosure Schedule***" shall have the meaning set forth in **Article 3.**

"***Organovo Employee Plan***" shall have the meaning set forth in **Section 3.11(c)**.

"***Organovo Intervening Event***" shall have the meaning set forth in **Section 5.3(d)**.

"***Organovo IP Rights***" shall mean (A) any and all Intellectual Property used in the conduct of the business of Organovo; and (B) any and all Organovo-Owned IP Rights.

"***Organovo Intervening Event Recommendation Determination Notice***" shall have the meaning set forth in **Section 5.3(d)**.

"***Organovo Lock-up Agreements***" shall have the meaning set forth in the Recitals.

"***Organovo Material Adverse Effect***" shall mean any Effect that, considered together with all other Effects that have occurred prior to the date of determination of the occurrence of the Organovo Material Adverse Effect, is or would reasonably be expected to be materially adverse to: (a) the business, condition (financial or otherwise), assets (including Intellectual Property), operations or financial performance of Organovo and the Organovo Subsidiaries taken as a whole; or (b) the ability of Organovo to timely consummate the Contemplated Transactions or to perform any of its covenants or obligations under the Agreement in all material respects; *provided*, *however*, that Effects from the following shall not be deemed to constitute (nor shall Effects from any of the following be taken into account in determining whether there has occurred) an Organovo Material Adverse Effect: (i) conditions generally affecting the industries in which Organovo and the Organovo Subsidiaries participate or the United States or global economy or capital markets as a whole, to the extent that such conditions do not have a materially disproportionate impact on Organovo and the Organovo Subsidiaries taken as a whole; (ii) any failure by Organovo or any of its Subsidiaries to meet internal projections or forecasts or third party revenue or earnings predictions for any period ending on or after the date of this Agreement (it being understood, however, that any Effect causing or contributing to any such failure to meet projections or predictions may constitute an Organovo Material Adverse Effect and may be taken into account in determining whether an Organovo Material Adverse Effect has occurred); (iii) the execution, delivery, announcement or performance of the obligations under this Agreement or the announcement, pendency or anticipated consummation of the Contemplated Transactions; (iv) the resignation or termination of any officer or director; (v) any natural disaster or any acts of terrorism, sabotage, military action or war (whether or not declared) or any escalation or worsening thereof; or (vi) any changes (after the date of this Agreement) in GAAP or applicable Legal Requirements.

"***Organovo Material Contract***" shall have the meaning set forth in **Section 3.7**.

"***Organovo Net Cash***" shall mean (a) the sum of Organovo's cash and cash equivalents, marketable securities, accounts, interest and other receivables (to the extent determined to be collectible), and deposits (to the extent refundable to Organovo), in each case as of the close of business on the Business Day prior to the anticipated Closing Date, determined in a manner consistent with the manner in which such items were historically determined and in accordance with GAAP and Organovo's most recent audited financial statements and the Organovo Unaudited Interim Balance Sheet, minus (b) Organovo's accounts payable and accrued expenses (other than accrued expenses which are Organovo Transaction Expenses), Organovo's and its Subsidiaries' other liabilities (short term and long term) not included in the definition of Organovo Debt, in each case determined in a manner consistent with the manner in which such items were historically determined and in accordance with Organovo's most recent audited financial statements and the Organovo Unaudited Interim Balance Sheet, minus (c) the cash cost of any unpaid change of control payments or severance payments, including any COBRA related obligations, that are or become due to any current or former employee, director or independent contractor of Organovo, minus (d) any remaining unpaid Organovo Transaction Expenses (including any attorney's, accountant's, financial advisor's or finder's fees) as of such date for which Organovo or any of its Subsidiaries is liable incurred by Organovo or any of its Subsidiaries in connection with this Agreement and the Contemplated Transactions or otherwise, minus (e) to the extent the 2019 Employment Tax Audit has not been completed as of the Closing, an amount to be mutually agreed upon by Organovo and Buyer, but in no event to exceed $90,000, unless the Employment Development Department performing the 2019 Employment Tax Audit assesses prior to the Closing the Tax liability to be greater than $90,000, in which case the amount to be deducted pursuant to this subsection (e) shall be the amount assessed by the Employment Development Department (unless such amount is already deducted pursuant to this definition of Organovo Net Cash), plus (f) an amount equal to the product of (i) the Nasdaq listing fees paid by Organovo for the 2020 calendar year not to exceed $138,000 multiplied by (ii) a fraction, (A) the numerator of which is equal to that number of calendar days between the Closing and December 31, 2020 and (B) the denominator of which is equal to 366. Notwithstanding the foregoing, in no case shall Organovo Net Cash be reduced for any costs or expenses, including attorney's fees or settlement costs, incurred in connection with (i) any potential or actual security holder litigation arising or resulting from this Agreement, the Merger or the Contemplated Transactions and that may be brought in connection with or on behalf of any Organovo security holder's interest in Organovo Capital Stock (including all amounts paid or payable up to the retention amount of any insurance policy that is or may cover such costs or expenses and amounts not covered by any such insurance policy) or (ii) any Dissenting Shares. For purposes of clarity, any liabilities or obligations included in the calculation of the Organovo Debt as of the Closing Date shall not also reduce the calculation of Organovo Net Cash as of the Closing Date. For purposes of clarity, any cash proceeds received by Organovo from an Organovo Asset Sale, whether such sale is consummated prior to, concurrent with, or immediately following the Closing, that would otherwise constitute Organovo Net Cash shall be included in the definition of Organovo Net Cash for purposes of this Agreement.

"***Organovo Options***" shall mean options to purchase shares of Organovo Common Stock issued or granted by Organovo.

"***Organovo-Owned IP Rights***" shall mean any and all Intellectual Property owned (or purported to be owned) by Organovo.

"***Organovo Permits***" shall have the meaning set forth in **Section 3.9(b)**.

"***Organovo Permitted Alternative Agreement***" shall have the meaning set forth in **Section 9.1(j)**.

"***Organovo Product Candidates***" shall have the meaning set forth in **Section 3.9(d)**.

"***Organovo Recommendation Determination Notice***" shall have the meaning set forth in **Section 5.3(c)**.

"***Organovo Registered Intellectual Property***" shall mean all United States, international and foreign: (A) patents and patent applications (including provisional applications), (B) registered trademarks, applications to register trademarks, intent-to-use applications, or other registrations or applications related to trademarks, (C) registered Internet domain names, (D) registered copyrights and applications for copyright registration and (E) any other Intellectual Property that is the subject of an application, certificate, filing, registration or other document issued, filed with, or recorded by any governmental authority owned by, registered or filed in the name of, Organovo.

"***Organovo Regulatory Permits***" shall have the meaning set forth in **Section 3.9(d)**.

"***Organovo RSUs***" shall mean an award that provides for payment at a future date of one or more shares of Organovo Common Stock or value derived therefrom, other than an Organovo Option.

"***Organovo SEC Documents***" shall have the meaning set forth in **Section 3.4(a)**.

*"**Organovo Stockholder Proposals**" means* proposals to (i) adopt this Agreement and the Merger and to approve the issuance of the shares of Organovo Common Stock by virtue of the Merger, (ii) adopt an amendment to the Organovo Certificate of Incorporation to effect the reverse stock split, (iii) adopt an amendment to the Organovo Certificate of Incorporation changing Organovo's corporate name to "Tarveda Therapeutics, Inc.", (iv) approve, on a non-binding advisory vote basis, compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger and (v) adopt the New Tarveda Equity Plan and to approve amendment to the Organovo Certificate of Incorporation to increase the amount of Organovo Common Stock for issuance under the New Tarveda Equity Plan.

"***Organovo Stockholder Support Agreements***" shall have the meaning set forth in the recitals.

"***Organovo Stockholders' Meeting***" shall have the meaning set forth in **Section 5.3(a)**.

"***Organovo Subsidiaries***" means any Subsidiaries of Organovo.

"***Organovo Termination Fee***" shall have the meaning set forth in **Section 9.3(c)**.

"***Organovo Transaction Expenses***" means all fees and expenses incurred by Organovo in connection with the Contemplated Transactions and this Agreement and the transactions contemplated by this Agreement, including as set forth in Section 9.3(a), whether or not billed or accrued (including any fees and expenses of legal counsel and accountants, the maximum amount of fees and expenses payable to financial advisors, investment bankers, brokers, consultants and other advisors of Organovo and the Organovo Subsidiaries notwithstanding any contingencies for earn outs or escrows and any unpaid amounts payable by Organovo in satisfaction of its obligations under Section 5.7(c) for the period after the Closing).

An "***Organovo Triggering Event***" shall be deemed to have occurred if: (i) the Board of Directors of Organovo shall have failed to recommend that Organovo's stockholders vote to approve the Organovo Stockholder Proposals or shall for any reason have withdrawn or shall have modified in a manner adverse to Buyer the Organovo Board Recommendation, including pursuant to an Organovo Board Adverse Recommendation Change; (ii) Organovo shall have failed to include in the Proxy Statement the Organovo Board Recommendation; (iii) Organovo shall have failed to hold the Organovo Stockholders' Meeting within forty five (45) days after the Form S-4 Registration Statement is declared effective under the Securities Act (other than to the extent that the Form S-4 Registration Statement is subject to any stop order or proceeding (or threatened proceeding by the SEC) seeking a stop order with respect to the Form S-4 Registration Statement, in which case such forty five (45) day period shall be tolled for so long as such stop order remains in effect or proceeding or threatened proceeding remains pending); (iv) the Board of Directors of Organovo shall have publicly approved, endorsed or recommended any Acquisition Proposal; (v) the Board of Directors of Organovo shall have failed to

publicly reaffirm the Organovo Board Recommendation within ten (10) Business Days after Buyer so requests in writing; or (vi) Organovo or any director, officer or agent of Organovo shall have breached the provisions set forth in **Section 4.5** in any material respect.

"***Organovo Unaudited Interim Balance Sheet***" shall mean the unaudited consolidated balance sheet of Organovo prepared in accordance with GAAP and included in Organovo's Report on Form 10-Q filed with the SEC for the period ended September 30, 2019.

"***Organovo Warrants***" shall have the meaning set forth in **Section 3.3(c)**.

"***Party***" or "***Parties***" shall mean Buyer, Merger Sub and Organovo.

"***Person***" shall mean any individual, Entity or Governmental Body.

"***Post-Closing Outstanding Shares***" shall mean the total number of Organovo Outstanding Shares plus the Buyer Transaction Shares as determined immediately following the Closing.

"***Pre-Closing Period***" shall have the meaning set forth in **Section 4.1**.

"***Preferred Stock Conversion***" shall have the meaning set forth in **Section 7.7**.

"***Proxy Statement***" shall mean the proxy statement in connection with the approval of this Agreement and the Contemplated Transactions to be sent to Organovo's stockholders in connection with the Organovo Stockholders' Meeting.

"***Representatives***" shall mean directors, officers, other employees, agents, attorneys, accountants, advisors and representatives.

"***Required Buyer Stockholder Vote***" shall have the meaning set forth in **Section 2.19.**

"***Required Organovo Stockholder Vote***" shall have the meaning set forth in **Section 3.17**.

"***Reverse Split***" shall have the meaning set forth in **Section 5.16**.

"***Sarbanes-Oxley Act***" shall mean the Sarbanes-Oxley Act of 2002, as it may be amended from time to time.

"***SEC***" shall mean the United States Securities and Exchange Commission.

"***Securities Act***" shall mean the Securities Act of 1933, as amended.

"***Subsequent Transaction***" shall mean any Acquisition Transaction that results or would result in any third party beneficially owning securities of a Party representing more than fifty percent (50%) of the voting power of the outstanding securities of a Party or owning assets representing more than fifty percent (50%) of the consolidated fair market value of the assets of a Party and its Subsidiaries, taken as a whole.

An entity shall be deemed to be a "***Subsidiary***" of another Person if such Person directly or indirectly owns or purports to own, beneficially or of record, (a) an amount of voting securities of other interests in such entity that is sufficient to enable such Person to elect at least a majority of the members of such entity's board of directors or other governing body, or (b) at least 50% of the outstanding equity, voting, beneficial or financial interests in such Entity.

"***Superior Offer***" shall mean an unsolicited bona fide Acquisition Proposal (with all references to "more than fifteen percent (15%)" or "fifteen percent (15%) ore more" in the definition of Acquisition Transaction

being treated as references to "one hundred percent (100%)" for these purposes) made by a third party that the Board of Directors of Buyer or Organovo, as applicable, determines in good faith, after consultation with its outside legal counsel and financial advisor, and after taking into account all financial, legal, regulatory, and other aspects of such Acquisition Proposal (including the financing terms and the ability of such third party to finance such Acquisition Proposal), (1) is more favorable from a financial point of view to the Buyer or Organovo stockholders, as applicable, than as provided hereunder (including any changes to the terms of this Agreement proposed by either Party in response to such Superior Offer pursuant to and in accordance with the provisions of this Agreement), (2) is not subject to any financing condition (and if financing is required, such financing is then fully committed to the third party pursuant to customary commitment letters), (3) is reasonably capable of being completed on the terms proposed without unreasonable delay and (4) includes termination rights exercisable by the Party on terms that are not materially less favorable to such Party than the terms set forth in this Agreement, all from a third party capable of performing such terms.

"***Surviving Corporation***" shall have the meaning set forth in **Section 1.1**.

"***Tax***" (and with correlative meaning, "***Taxes***") shall mean federal, state, local, non-U.S. or other tax, including any income, capital gain, gross receipts, capital stock, profits, transfer, estimated, registration, stamp, premium, escheat, unclaimed property, customs duty, ad valorem, occupancy, occupation, alternative, add-on, windfall profits, value added, severance, property, business, production, sales, use, license, excise, franchise, employment, payroll, social security, disability, unemployment, workers' compensation, national health insurance, withholding or other taxes, duties, fees, assessments or governmental charges, surtaxes or deficiencies thereof of any kind whatsoever, however denominated, and including any fine, penalty, addition to tax or interest imposed by a Governmental Body with respect thereto...

"***Tax Return***" shall mean any return (including any information return), report, statement, declaration, estimate, schedule, notice, notification, form, election, certificate or other document or information, and any amendment or supplement to any of the foregoing, filed with or submitted to, or required to be filed with or submitted to, any Governmental Body in connection with the determination, assessment, collection or payment of any Tax or in connection with the administration, implementation or enforcement of or compliance with any Legal Requirement relating to any Tax.

"***Third Party Expenses***" shall mean all reasonable fees and expenses incurred by Buyer or Organovo, as applicable, in connection with this Agreement and the transactions contemplated hereby, including (x) all fees and expenses incurred in connection with the preparation, printing and filing, as applicable, of the Form S-4 Registration Statement (including any preliminary materials related thereto and all amendments and supplements thereto, as well as any financial statements and schedules thereto) and (y) all fees and expenses incurred in connection with the preparation and filing under any filing requirement of any Governmental Authority applicable to this Agreement and the transactions contemplated hereby.

"***Third-Party IP Rights***" shall mean any Intellectual Property owned by a third party.

"***Treasury Regulations***" shall mean the United States Treasury regulations promulgated under the Code.

Schedule A

Taylor Crouch
Craig Kussman
Jennifer Bush
Kirk Malloy
Mark Kessel
Richard Maroun
David Shapiro
Carolyn D. Beaver

Schedule B

Andrew J. Fromkin
Jeffrey D. Bloss
Brian Roberts
Mark Bilodeau
Sudhakar Kadiyala
Dennis Ausiello
Omid Farokhzad
Nilesh Kumar
Robert S. Langer, Jr.
Guido Magni
Michael A. Metzger
Aymeric Sallin
Novo Holdings A/S
NanoDimension, L.P.
NanoDimension II, L.P.
Versant Affiliates Fund V, L.P.
Versant Ophthalmic Affiliates Fund I, L.P.
Versant Venture Capital V (Canada) LP
Versant Venture Capital V, L.P.

Schedule C
Investor Agreements

1. The Fifth Amended and Restated Investors' Rights Agreement dated as of December 12, 2019, by and among Tarveda Therapeutics, Inc. and the other parties thereto.
2. The Fifth Amended and Restated Right of First Refusal and Co-Sale Agreement dated as of December 12, 2019, by and among Tarveda Therapeutics, Inc. and the other parties thereto.
3. The Fifth Amended and Restated Voting Agreement dated as of December 12, 2019, by and among Tarveda Therapeutics, Inc. and the other parties thereto.

FIRST AMENDMENT TO
MERGER AGREEMENT

This First Amendment (this "***Amendment***") is made and entered into as of January 26, 2020, and amends that certain Agreement and Plan of Merger and Reorganization (the "***Merger Agreement***," and together as amended by the Amendment, the "***Amended Agreement***"), dated as of December 13, 2019, by and among Organovo Holdings, Inc., a Delaware corporation ("***Organovo***"), Opal Merger Sub, Inc., a Delaware corporation ("***Merger Sub***"), and Tarveda Therapeutics, Inc. ("***Buyer***"). Capitalized terms used herein without definition shall have the meanings ascribed to such terms in the Merger Agreement.

RECITALS

WHEREAS, the undersigned parties to the Merger Agreement desire to amend the terms and conditions of the Merger Agreement as set forth herein;

WHEREAS, pursuant to Section 10.2 of the Merger Agreement, the Merger Agreement may be amended with the approval of the respective Board of Directors of Buyer, Merger Sub and Organovo; and

WHEREAS, the respective Board of Directors of Buyer, Merger Sub and Organovo have authorized each of Buyer, Merger Sub and Organovo entering into this Amendment.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, agree as follows:

1. Amendments.

1.1 The parties hereby agree that Section 5.20 of the Merger Agreement is amended and restated in its entirety as follows:

"**5.20 Organovo Asset Sale**. Buyer and Organovo agree that Organovo shall not, without the prior written consent of Buyer, sell, assign, or otherwise dispose of, in one or more transactions, its IP Rights, inventory, equipment and related agreements, assets and technology at any time prior to or concurrent with the Closing (each an "***Organovo Asset Sale***")."

1.2 The parties hereby agree that Section 6.3 of the Merger Agreement is amended and restated in its entirety as follows:

"**6.3 Stockholder Approval.** This Agreement, the Merger and the other transactions contemplated by this Agreement shall have been duly adopted and approved by the required Buyer Stockholder Vote, and the matters referenced in subsections (i) and (ii) of the Organovo Stockholder Proposals definition shall have been duly approved by the Required Organovo Stockholder Vote."

1.3 The parties hereby agree that Section 9.1(d) of the Merger Agreement is amended and restated in its entirety as follows:

"**(d)** by either Organovo or Buyer if (i) the Organovo Stockholders' Meeting (including any adjournments and postponements thereof) shall have been held and completed and Organovo's stockholders shall have taken a final vote on the Organovo Stockholder Proposals and (ii) the matters referenced in subsections (i) and (ii) of the Organovo Stockholder Proposals definition shall not have been approved at the Organovo Stockholders' Meeting (or any adjournment or postponement thereof) by the Required Organovo Stockholder Vote; *provided*, *however*, that the right to terminate this Agreement under this **Section 9.1(d)** shall not be available to Organovo where the failure to obtain such Required Organovo Stockholder Vote shall have been caused by the action or failure to act of Organovo and such action or failure to act constitutes a material breach by Organovo of this Agreement;"

1.4 The parties hereby agree that the defined term "Organovo Stockholder Proposals" as set forth in Exhibit A to the Merger Agreement shall be amended and restated in its entirety as follows:

""***Organovo Stockholder Proposals***" means proposals to (i) approve the issuance of the shares of Organovo Common Stock by virtue of the Merger in accordance with the terms of this Agreement, (ii) adopt an amendment to the Organovo Certificate of Incorporation to effect the reverse stock split, (iii) approve, on a non-binding advisory vote basis, compensation that will or may become payable by Organovo to its named executive officers in connection with the Merger, (iv) adopt the New Tarveda Equity Plan and (v) to adjourn the special meeting, if necessary, if a quorum is present, to solicit additional proxies if there are not sufficient votes in favor of the preceding proposals (i) through (iv)."

1.5 The parties hereby agree that the defined term "Organovo Valuation" as set forth in Exhibit A to the Merger Agreement shall be amended and restated in its entirety as follows:

""***Organovo Valuation***" means $50,000,000 less any Organovo Debt, provided however, that the Organovo Valuation shall be (i) increased on a dollar-for-dollar basis by the amount that Organovo Net Cash at Closing is greater than $22,000,000, (ii) reduced on a dollar-for-dollar basis by the amount that Organovo Net Cash at Closing is less than $22,000,000, and (iii) increased by $1,500,000 provided that Organovo has not sold or disposed of remaining assets in an Organovo Asset Sale."

2. Reference to and Effect on the Merger Agreement. On or after the date hereof, each reference in the Merger Agreement to "this Agreement," "hereunder," "herein" or words of like import shall mean and be a reference to the Agreement as amended hereby. No reference to this Amendment need be made in any instrument or document at any time referring to the Merger Agreement, a reference to the Merger Agreement in any of such to be deemed a reference to the Amended Agreement.

3. No Other Amendments. Except as set forth herein, the Merger Agreement shall remain in full force and effect in accordance with its terms, which such terms are hereby ratified and confirmed and remain in full force and effect.

4. Counterparts. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

5. Titles and Subtitles. The titles and subtitles used in this Amendment are used for convenience only and are not to be considered in construing or interpreting this Amendment.

6. Governing Law. This Amendment and all acts and transactions pursuant hereto and the rights of obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the State of Delaware without regard to its choice of laws principles.

(Signature Pages Follow)

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date first above written.

ORGANOVO:

ORGANOVO HOLDINGS, INC.

By: /s/ Taylor Crouch
Name: Taylor Crouch
Title: Chief Executive Officer

MERGER SUB:

OPAL MERGER SUB, INC.

By: /s/ Taylor Crouch
Name: Taylor Crouch
Title: Chief Executive Officer

BUYER:

TARVEDA THERAPEUTICS, INC.

By: /s/ Andrew J. Fromkin
Name: Andrew J. Fromkin
Title: Chief Executive Officer

Annex B

OPINION LETTER OF ROTH CAPITAL PARTNERS, LLC

December 12, 2019

Special Committee of the Board of Directors
Organovo Holdings, Inc.
6275 Nancy Ridge Drive
Suite 110
San Diego, CA 92121

Ladies and Gentlemen:

You have requested our opinion as to the fairness, from a financial point of view, to Organovo Holdings, Inc. ("Organovo") of the Merger Consideration (as defined below) to be paid by Organovo pursuant to the terms of the proposed Agreement and Plan of Merger and Reorganization (the "Merger Agreement") to be entered into by and among Organovo, Organovo Merger Sub Inc. ("Merger Sub") and Tarveda Therapeutics, Inc. (the "Buyer"). Capitalized terms used herein have the respective meanings ascribed thereto in the December 9, 2019 draft of the Merger Agreement provided to us by Organovo (the "Draft Merger Agreement").

As more specifically set forth in the Merger Agreement, and subject to the terms, conditions and adjustments set forth therein, the Merger Agreement provides for the acquisition of the Buyer by Organovo through the merger of Merger Sub with and into the Buyer with the Buyer as the surviving entity thereof (the "Merger"). By virtue of the Merger, each share of Buyer Common Stock issued and outstanding immediately prior to, and contingent upon the occurrence of, the Effective Time (excluding shares of Buyer Capital Stock held in the treasury of the Buyer and any Dissenting Shares) will be converted into and represent the right to receive such number of shares of validly issued, fully paid and nonassessable shares of common stock of Organovo, $0.001 par value per share ("Organovo Common Stock"), as is equal to the Exchange Ratio, subject to a cash payment in the case of any fractional shares of Organovo Common Stock to be issued or paid in consideration therefor based on the closing price of the Organovo Common Stock on the Effective Date (collectively, the "Merger Consideration").

The Merger Agreement provides that the number of shares of Organovo Common Stock issuable in the Merger will be based on the relative valuation of Organovo and the Buyer with Organovo having a valuation equal to $50.0 million less indebtedness of Organovo at Closing, subject to adjustment on a dollar-for-dollar basis to the extent that Organovo's unrestricted cash and cash equivalents as of the Closing is more or less than $22.0 million, and the Buyer having a pre-money valuation equal to $150.0 million less indebtedness of Buyer at Closing, other than up to $10 million in indebtedness under a credit facility with Oxford Finance and the relative proportions of outstanding Organovo Common Stock and Buyer Capital Stock as of the Closing (in each case, on a fully diluted basis).

In addition to the Merger, the Merger Agreement provides that, at the Effective Time, the vesting of each Buyer Option that is outstanding and unexercised immediately prior to the Effective Time under the Buyer Option Plan

will be, to the extent not exercised prior to the Effective Time, converted into and become an option to purchase Organovo Common Stock with terms reflecting the Merger Consideration. In addition, at the Effective Time, each outstanding Buyer Warrant will be converted into and become a warrant to purchase Organovo Common Stock with terms reflecting the Merger Consideration, and Organovo will assume such Buyer Warrants.

The consummation of the Merger is subject to a number of conditions precedent, including the effectiveness of a Registration Statement on Form S-4 to be filed with the Securities and Exchange Commission, the listing of the shares of Organovo Common Stock to be issued as Merger Consideration and the approval of the transaction by the stockholders of both Buyer and Organovo.

For purposes of this opinion, with your approval and without independent verification, we have assumed that: (i) the Merger Consideration will consist solely of the issuance of approximately 422.9 million shares of Organovo Common Stock, (ii) the former holders of Buyer Capital Stock will own approximately 74.0% of the outstanding equity of Organovo immediately following the Effective Time, and (iii) the holders of the outstanding equity of Organovo immediately prior to the Merger will own approximately 26.0% of the outstanding equity of Organovo immediately following the Effective Time.

In connection with our review of the proposed Merger, and in arriving at our opinion, we have: (i) reviewed the Draft Merger Agreement; (ii) reviewed and analyzed certain information, including financial forecasts, relating to the estimated cash usage of each of Organovo and the Buyer, on stand-alone bases, that were furnished to us by Organovo and the Buyer, respectively; (iii) conducted discussions with members of senior management and representatives of Organovo and the Buyer concerning the matters described in clause (ii); (iv) reviewed the pro forma ownership structure of the combined entity resulting from the Merger; (v) discussed the past and current operations, financial condition and the business and prospects of Organovo and the Buyer with members of senior management of Organovo and of the Buyer, respectively; (vi) reviewed the reported prices and trading history of shares of Organovo's common stock; (vii) compared certain publicly available financial and other information of certain publicly traded companies that we deemed relevant; (viii) reviewed the financial terms, to the extent publicly available, of certain acquisition and financing transactions that we deemed relevant; and (ix) performed such other analyses and considered such other factors as we deemed appropriate for the purpose of rendering our opinion.

We have assumed and relied upon, without verifying independently, the accuracy and completeness of all information that was publicly available or was furnished, or otherwise made available, to us or discussed with or reviewed by or for us for purposes of preparing this opinion. We have further assumed that the financial information provided has been prepared by the respective managements of Organovo and the Buyer on a reasonable basis in accordance with industry practice, and that the managements of Organovo and the Buyer are not aware of any information or facts that would make any information provided to us incomplete or misleading. Without limiting the generality of the foregoing, for the purpose of this opinion, we have assumed that the respective managements of Organovo and the Buyer prepared reasonably the financial forecasts, estimates and other forward-looking information reviewed by us, based on assumptions reflecting their best currently available estimates and judgments as to the expected future results of operations and financial condition of Organovo and the Buyer, respectively. We express no opinion as to any such financial forecasts, estimates or forward-looking information or the assumptions on which they were based.

In connection with our opinion, we have assumed and relied upon, without independent verification, the accuracy and completeness of all of the financial, legal, regulatory, tax, accounting and other information provided to, discussed with or reviewed by us. Our opinion does not address any legal, regulatory, tax or accounting issues.

In arriving at our opinion, we have assumed that the executed Merger Agreement will be in all material respects identical to the Draft Merger Agreement reviewed by us. We have relied upon and assumed, without independent verification, that (i) the representations and warranties of all parties set forth in the Merger Agreement and all related documents and instruments that are referred to therein are true and correct, (ii) each party to the Merger Agreement will fully and timely perform all of the covenants and agreements required to be performed by such party, (iii) the Merger will be consummated pursuant to the terms of the Merger Agreement without amendments thereto, and (iv) all conditions to the consummation of the Merger will be satisfied without waiver by any party of any conditions or obligations thereunder. Additionally, we have assumed that all the necessary regulatory approvals and consents required for the Merger, including the approval of the stockholders of Buyer and Organovo, will be obtained in a manner that will not adversely affect either such party.

In arriving at our opinion, we have not performed any appraisals or valuations of any specific assets or liabilities (fixed, contingent or other) of Organovo or the Buyer, and have not been furnished or provided with any such appraisals or valuations. Without limiting the generality of the foregoing, we have undertaken no independent analysis of any pending or threatened litigation, regulatory action, possible unasserted claims or other contingent liabilities, to which Organovo, the Buyer or any of their respective affiliates is a party or may be subject, and at your direction and with your consent, our opinion makes no assumption concerning, and therefore does not consider, the possible assertion of claims, outcomes or damages arising out of any such matters.

This opinion is necessarily based upon the information available to us and facts and circumstances as they exist and are subject to evaluation on the date hereof; events occurring after the date hereof could materially affect the assumptions used in preparing this opinion. We are not expressing any opinion herein as to the value of the shares of Organovo Common Stock to be issued in the Merger or the prices at which shares of Organovo Common Stock may trade following announcement of the Merger or at any future time. We have not undertaken to reaffirm or revise this opinion or otherwise comment upon any events occurring after the date hereof and do not have any obligation to update, revise or reaffirm this opinion.

We have been engaged by the Special Committee of the Board of Directors of Organovo to act as its financial advisor and will receive a fee for our services, part of which is contingent upon the successful consummation of the Merger. Our fee for providing this opinion is not contingent upon the consummation of the Merger. Organovo has also agreed to indemnify us against certain liabilities and reimburse us for certain expenses in connection with our services, which indemnification and reimbursement obligations are not contingent upon consummation of the Merger. In the ordinary course of business, we and our affiliates may acquire, hold or sell, for our and our affiliates' own accounts and for the accounts of customers, equity, debt and other securities and financial instruments (including bank loans and other obligations) of Organovo and the other parties to the Merger, and, accordingly, may at any time hold a long or a short position in such securities. Except as described above, we have not had a material relationship with, nor otherwise received fees from, Organovo, the Buyer or any other parties to the Merger during the two years preceding the date hereof. In the future, we may provide financial advisory and investment banking services to Organovo, the Buyer or their respective affiliates for which we would expect to receive compensation.

Consistent with applicable legal and regulatory requirements, Roth Capital Partners, LLC has adopted policies and procedures to establish and maintain the independence of our research departments and personnel. As a result, our research analysts may hold views, make statements or investment recommendations and/or publish research reports with respect to Organovo, the Buyer and/or the Merger that differ from the views of our investment banking personnel.

This opinion has been prepared for the information of the Special Committee of the Board of Directors of Organovo for its use in connection with its consideration of the Merger and is not intended to be and does not constitute a recommendation to any stockholder of the Buyer as to how such stockholder should vote on any matter relating to the Merger or any other matter. Except with respect to the inclusion of this opinion in the proxy statement/prospectus relating to the Merger in accordance with our engagement letter with Organovo, this opinion shall not be disclosed, referred to or published (in whole or in part), nor shall any public references to us be made, without our prior written approval. This opinion has been approved for issuance by the Roth Capital Partners, LLC Fairness Opinion Committee.

This opinion addresses only the fairness, from a financial point of view, to Organovo of the consideration to be paid by Organovo pursuant to the terms of the Merger Agreement and does not address the relative merits of the Merger or any alternatives to the Merger, Organovo's underlying decision to proceed with or effect the Merger, or any other aspect of the Merger. This opinion does not address the fairness of the Merger to the holders of any class of securities, creditors or other constituencies of Organovo. This opinion is not a valuation of Organovo or its assets or any class of its securities. We are not experts in, nor do we express an opinion on, legal, tax, accounting or regulatory issues. We do not express an opinion about the fairness of the amount or nature of any compensation payable or to be paid to any of the officers, directors or employees of Organovo, whether or not relative to the Merger.

Based upon and subject to the foregoing, it is our opinion that, as of the date hereof, the Merger Consideration specified in the Merger Agreement is fair from a financial point of view to Organovo.

Sincerely,

/s/ Roth Capital Partners, LLC

Roth Capital Partners, LLC

Annex C

SECTION 262 OF THE DELAWARE GENERAL CORPORATION LAW

§ 262. Appraisal rights.

(a) Any stockholder of a corporation of this State who holds shares of stock on the date of the making of a demand pursuant to subsection (d) of this section with respect to such shares, who continuously holds such shares through the effective date of the merger or consolidation, who has otherwise complied with subsection (d) of this section and who has neither voted in favor of the merger or consolidation nor consented thereto in writing pursuant to § 228 of this title shall be entitled to an appraisal by the Court of Chancery of the fair value of the stockholder's shares of stock under the circumstances described in subsections (b) and (c) of this section. As used in this section, the word "stockholder" means a holder of record of stock in a corporation; the words "stock" and "share" mean and include what is ordinarily meant by those words; and the words "depository receipt" mean a receipt or other instrument issued by a depository representing an interest in 1 or more shares, or fractions thereof, solely of stock of a corporation, which stock is deposited with the depository.

(b) Appraisal rights shall be available for the shares of any class or series of stock of a constituent corporation in a merger or consolidation to be effected pursuant to § 251 (other than a merger effected pursuant to § 251(g) of this title and, subject to paragraph (b)(3) of this section, § 251(h) of this title), § 252, § 254, § 255, § 256, § 257, § 258, § 263 or § 264 of this title:

(1) Provided, however, that, except as expressly provided in § 363(b) of this title, no appraisal rights under this section shall be available for the shares of any class or series of stock, which stock, or depository receipts in respect thereof, at the record date fixed to determine the stockholders entitled to receive notice of the meeting of stockholders to act upon the agreement of merger or consolidation, were either: (i) listed on a national securities exchange or (ii) held of record by more than 2,000 holders; and further provided that no appraisal rights shall be available for any shares of stock of the constituent corporation surviving a merger if the merger did not require for its approval the vote of the stockholders of the surviving corporation as provided in § 251(f) of this title.

(2) Notwithstanding paragraph (b)(1) of this section, appraisal rights under this section shall be available for the shares of any class or series of stock of a constituent corporation if the holders thereof are required by the terms of an agreement of merger or consolidation pursuant to §§ 251, 252, 254, 255, 256, 257, 258, 263 and 264 of this title to accept for such stock anything except:

a. Shares of stock of the corporation surviving or resulting from such merger or consolidation, or depository receipts in respect thereof;

b. Shares of stock of any other corporation, or depository receipts in respect thereof, which shares of stock (or depository receipts in respect thereof) or depository receipts at the effective date of the merger or consolidation will be either listed on a national securities exchange or held of record by more than 2,000 holders;

c. Cash in lieu of fractional shares or fractional depository receipts described in the foregoing paragraphs (b)(2)a. and b. of this section; or

d. Any combination of the shares of stock, depository receipts and cash in lieu of fractional shares or fractional depository receipts described in the foregoing paragraphs (b)(2)a., b. and c. of this section.

(3) In the event all of the stock of a subsidiary Delaware corporation party to a merger effected under § 251(h), § 253 or § 267 of this title is not owned by the parent immediately prior to the merger, appraisal rights shall be available for the shares of the subsidiary Delaware corporation.

(4) In the event of an amendment to a corporation's certificate of incorporation contemplated by § 363(a) of this title, appraisal rights shall be available as contemplated by § 363(b) of this title, and the procedures of this section, including those set forth in subsections (d) and (e) of this section, shall apply as nearly as practicable, with the word "amendment" substituted for the words "merger or consolidation," and the word "corporation" substituted for the words "constituent corporation" and/or "surviving or resulting corporation."

(c) Any corporation may provide in its certificate of incorporation that appraisal rights under this section shall be available for the shares of any class or series of its stock as a result of an amendment to its certificate of incorporation, any merger or consolidation in which the corporation is a constituent corporation or the sale of all or substantially all of the assets of the corporation. If the certificate of incorporation contains such a provision, the provisions of this section, including those set forth in subsections (d), (e), and (g) of this section, shall apply as nearly as is practicable.

(d) Appraisal rights shall be perfected as follows:

(1) If a proposed merger or consolidation for which appraisal rights are provided under this section is to be submitted for approval at a meeting of stockholders, the corporation, not less than 20 days prior to the meeting, shall notify each of its stockholders who was such on the record date for notice of such meeting (or such members who received notice in accordance with § 255(c) of this title) with respect to shares for which appraisal rights are available pursuant to subsection (b) or (c) of this section that appraisal rights are available for any or all of the shares of the constituent corporations, and shall include in such notice a copy of this section and, if 1 of the constituent corporations is a nonstock corporation, a copy of § 114 of this title. Each stockholder electing to demand the appraisal of such stockholder's shares shall deliver to the corporation, before the taking of the vote on the merger or consolidation, a written demand for appraisal of such stockholder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such stockholder's shares. A proxy or vote against the merger or consolidation shall not constitute such a demand. A stockholder electing to take such action must do so by a separate written demand as herein provided. Within 10 days after the effective date of such merger or consolidation, the surviving or resulting corporation shall notify each stockholder of each constituent corporation who has complied with this subsection and has not voted in favor of or consented to the merger or consolidation of the date that the merger or consolidation has become effective; or

(2) If the merger or consolidation was approved pursuant to § 228, § 251(h), § 253, or § 267 of this title, then either a constituent corporation before the effective date of the merger or consolidation or the surviving or resulting corporation within 10 days thereafter shall notify each of the holders of any class or series of stock of such constituent corporation who are entitled to appraisal rights of the approval of the merger or consolidation and that appraisal rights are available for any or all shares of such class or series of stock of such constituent corporation, and shall include in such notice a copy of this section and, if 1 of the constituent corporations is a nonstock corporation, a copy of § 114 of this title. Such notice may, and, if given on or after the effective date of the merger or consolidation, shall, also notify such stockholders of the effective date of the merger or consolidation. Any stockholder entitled to appraisal rights may, within 20 days after the date of mailing of such notice or, in the case of a merger approved pursuant to § 251(h) of this title, within the later of the consummation of the offer contemplated by § 251(h) of this title and 20 days after the date of mailing of such notice, demand in writing from the surviving or resulting corporation the appraisal of such holder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such holder's shares. If such notice did not notify stockholders of the effective date of the merger or consolidation, either (i) each such constituent corporation shall send a second notice before the effective date of the merger or consolidation notifying each of the holders of any class or series of stock of such constituent corporation that are entitled to appraisal rights of the effective date of the merger or consolidation or (ii) the surviving or resulting corporation shall send such a second notice to all such holders on or within 10 days after such effective date; provided, however, that if such second notice is sent more than 20 days following the sending of the first notice or, in the case of a merger approved pursuant to § 251(h) of this

title, later than the later of the consummation of the offer contemplated by § 251(h) of this title and 20 days following the sending of the first notice, such second notice need only be sent to each stockholder who is entitled to appraisal rights and who has demanded appraisal of such holder's shares in accordance with this subsection. An affidavit of the secretary or assistant secretary or of the transfer agent of the corporation that is required to give either notice that such notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein. For purposes of determining the stockholders entitled to receive either notice, each constituent corporation may fix, in advance, a record date that shall be not more than 10 days prior to the date the notice is given, provided, that if the notice is given on or after the effective date of the merger or consolidation, the record date shall be such effective date. If no record date is fixed and the notice is given prior to the effective date, the record date shall be the close of business on the day next proceeding the day on which the notice is given.

(e) Within 120 days after the effective date of the merger or consolidation, the surviving or resulting corporation or any stockholder who has complied with subsections (a) and (d) of this section hereof and who is otherwise entitled to appraisal rights, may commence an appraisal proceeding by filing a petition in the Court of Chancery demanding a determination of the value of the stock of all such stockholders. Notwithstanding the foregoing, at any time within 60 days after the effective date of the merger or consolidation, any stockholder who has not commenced an appraisal proceeding or joined that proceeding as a named party shall have the right to withdraw such stockholder's demand for appraisal and to accept the terms offered upon the merger or consolidation. Within 120 days after the effective date of the merger or consolidation, any stockholder who has complied with the requirements of subsections (a) and (d) of this section hereof, upon written request, shall be entitled to receive from the corporation surviving the merger or resulting from the consolidation a statement setting forth the aggregate number of shares not voted in favor of the merger or consolidation and with respect to which demands for appraisal have been received and the aggregate number of holders of such shares. Such written statement shall be mailed to the stockholder within 10 days after such stockholder's written request for such a statement is received by the surviving or resulting corporation or within 10 days after expiration of the period for delivery of demands for appraisal under subsection (d) of this section hereof, whichever is later. Notwithstanding subsection (a) of this section, a person who is the beneficial owner of shares of such stock held either in a voting trust or by a nominee on behalf of such person may, in such person's own name, file a petition or request from the corporation the statement described in this subsection.

(f) Upon the filing of any such petition by a stockholder, service of a copy thereof shall be made upon the surviving or resulting corporation, which shall within 20 days after such service file in the office of the Register in Chancery in which the petition was filed a duly verified list containing the names and addresses of all stockholders who have demanded payment for their shares and with whom agreements as to the value of their shares have not been reached by the surviving or resulting corporation. If the petition shall be filed by the surviving or resulting corporation, the petition shall be accompanied by such a duly verified list. The Register in Chancery, if so ordered by the Court, shall give notice of the time and place fixed for the hearing of such petition by registered or certified mail to the surviving or resulting corporation and to the stockholders shown on the list at the addresses therein stated. Such notice shall also be given by 1 or more publications at least 1 week before the day of the hearing, in a newspaper of general circulation published in the City of Wilmington, Delaware or such publication as the Court deems advisable. The forms of the notices by mail and by publication shall be approved by the Court, and the costs thereof shall be borne by the surviving or resulting corporation.

(g) At the hearing on such petition, the Court shall determine the stockholders who have complied with this section and who have become entitled to appraisal rights. The Court may require the stockholders who have demanded an appraisal for their shares and who hold stock represented by certificates to submit their certificates of stock to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any stockholder fails to comply with such direction, the Court may dismiss the proceedings as to such stockholder. If immediately before the merger or consolidation the shares of the class or series of stock of the constituent corporation as to which appraisal rights are available were listed on a national securities exchange, the Court shall dismiss the proceedings as to all holders of such shares who are otherwise entitled to appraisal rights unless

(1) the total number of shares entitled to appraisal exceeds 1% of the outstanding shares of the class or series eligible for appraisal, (2) the value of the consideration provided in the merger or consolidation for such total number of shares exceeds $1 million, or (3) the merger was approved pursuant to § 253 or § 267 of this title.

(h) After the Court determines the stockholders entitled to an appraisal, the appraisal proceeding shall be conducted in accordance with the rules of the Court of Chancery, including any rules specifically governing appraisal proceedings. Through such proceeding the Court shall determine the fair value of the shares exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors. Unless the Court in its discretion determines otherwise for good cause shown, and except as provided in this subsection, interest from the effective date of the merger through the date of payment of the judgment shall be compounded quarterly and shall accrue at 5% over the Federal Reserve discount rate (including any surcharge) as established from time to time during the period between the effective date of the merger and the date of payment of the judgment. At any time before the entry of judgment in the proceedings, the surviving corporation may pay to each stockholder entitled to appraisal an amount in cash, in which case interest shall accrue thereafter as provided herein only upon the sum of (1) the difference, if any, between the amount so paid and the fair value of the shares as determined by the Court, and (2) interest theretofore accrued, unless paid at that time. Upon application by the surviving or resulting corporation or by any stockholder entitled to participate in the appraisal proceeding, the Court may, in its discretion, proceed to trial upon the appraisal prior to the final determination of the stockholders entitled to an appraisal. Any stockholder whose name appears on the list filed by the surviving or resulting corporation pursuant to subsection (f) of this section and who has submitted such stockholder's certificates of stock to the Register in Chancery, if such is required, may participate fully in all proceedings until it is finally determined that such stockholder is not entitled to appraisal rights under this section.

(i) The Court shall direct the payment of the fair value of the shares, together with interest, if any, by the surviving or resulting corporation to the stockholders entitled thereto. Payment shall be so made to each such stockholder, in the case of holders of uncertificated stock forthwith, and the case of holders of shares represented by certificates upon the surrender to the corporation of the certificates representing such stock. The Court's decree may be enforced as other decrees in the Court of Chancery may be enforced, whether such surviving or resulting corporation be a corporation of this State or of any state.

(j) The costs of the proceeding may be determined by the Court and taxed upon the parties as the Court deems equitable in the circumstances. Upon application of a stockholder, the Court may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorney's fees and the fees and expenses of experts, to be charged pro rata against the value of all the shares entitled to an appraisal.

(k) From and after the effective date of the merger or consolidation, no stockholder who has demanded appraisal rights as provided in subsection (d) of this section shall be entitled to vote such stock for any purpose or to receive payment of dividends or other distributions on the stock (except dividends or other distributions payable to stockholders of record at a date which is prior to the effective date of the merger or consolidation); provided, however, that if no petition for an appraisal shall be filed within the time provided in subsection (e) of this section, or if such stockholder shall deliver to the surviving or resulting corporation a written withdrawal of such stockholder's demand for an appraisal and an acceptance of the merger or consolidation, either within 60 days after the effective date of the merger or consolidation as provided in subsection (e) of this section or thereafter with the written approval of the corporation, then the right of such stockholder to an appraisal shall cease. Notwithstanding the foregoing, no appraisal proceeding in the Court of Chancery shall be dismissed as to any stockholder without the approval of the Court, and such approval may be conditioned upon such terms as the Court deems just; provided, however that this provision shall not affect the right of any stockholder who has not commenced an appraisal proceeding or joined that proceeding as a named party to withdraw such stockholder's demand for appraisal and to accept the terms offered upon the merger or consolidation within 60 days after the effective date of the merger or consolidation, as set forth in subsection (e) of this section.

(l) The shares of the surviving or resulting corporation to which the shares of such objecting stockholders would have been converted had they assented to the merger or consolidation shall have the status of authorized and unissued shares of the surviving or resulting corporation.

Annex D

CERTIFICATE OF SECOND AMENDMENT
TO THE
CERTIFICATE OF INCORPORATION
OF
ORGANOVO HOLDINGS, INC.

Organovo Holdings, Inc. (the "corporation"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "DGCL"), does hereby certify that:

A. The name of this corporation is Organovo Holdings, Inc. and the date on which the Certificate of Incorporation of this corporation was originally filed with the Secretary of State of the State of Delaware was January 27, 2012 (the "Certificate of Incorporation").

B. The date on which the first amendment to the Certificate of Incorporation was originally filed with the Secretary of State of the State of Delaware was July 26, 2018.

C. The Board of Directors of the corporation has duly adopted resolutions proposing and declaring advisable that the Certificate of Incorporation be further amended as set forth herein and calling for the consideration and approval thereof at a meeting of the stockholders of the corporation.

D. The Certificate of Incorporation is hereby further amended to add the following paragraph as the last paragraph of ARTICLE IV in the form below:

"**Reverse Stock Split.** Immediately upon the filing of this Certificate of Second Amendment to the Certificate of Incorporation with the Secretary of State of the State of Delaware every 20 to 40 shares of Common Stock issued and outstanding (or held in treasury) immediately prior to such filing shall be automatically reclassified and combined into one (1) validly issued, fully paid and non-assessable share of Common Stock, the exact ratio within such range to be determined by the Board of Directors of the corporation prior to the effective time of the Reverse Split and publicly announced by the corporation. The aforementioned reclassification shall be referred to collectively as the "Reverse Split".

The Reverse Split shall occur without any further action on the part of the corporation or the stockholders of the corporation and whether or not certificates representing such stockholders' shares prior to the Reverse Split are surrendered for cancellation. No fractional interest in a share of Common Stock shall be deliverable upon the Reverse Split. All shares of Common Stock (including fractions thereof) issuable upon the Reverse Split held by a holder prior to the Reverse Split shall be aggregated for purposes of determining whether the Reverse Split would result in the issuance of any fractional share. Any fractional share resulting from such aggregation upon the Reverse Split shall be rounded down to the nearest whole number. Each holder who would otherwise be entitled to a fraction of a share of Common Stock upon the Reverse Split (after aggregating all fractions of a share to which such stockholder would otherwise be entitled) shall, in lieu thereof, be entitled to receive a cash payment in an amount equal to the product of such fraction to which the stockholder would otherwise be entitled multiplied by the closing price of the corporation's Common Stock as reported on the Nasdaq Global Market or the Nasdaq Capital Market on the trading day immediately preceding the filing of this Certificate of Second Amendment to the Certificate of Incorporation with the Secretary of State of the State of Delaware (as adjusted to give effect to the Reverse Split), rounded up to the nearest whole cent. The corporation shall not be obliged to issue certificates evidencing the shares of Common Stock outstanding as a result of the Reverse Split or cash in lieu of fractional shares, if any, unless and until the certificates evidencing the shares held by a holder prior to the Reverse Split are either delivered to the corporation or its transfer agent, or the holder notifies the corporation or its transfer agent that such"

IN WITNESS WHEREOF, Organovo Holdings, Inc. has caused this Certificate of Second Amendment to be executed by its duly authorized officer on this day of , 2020.

ORGANOVO HOLDINGS, INC.

By: _____
Taylor Crouch
Chief Executive Officer and President

Annex E

COMBINED ORGANIZATION
2020 EQUITY INCENTIVE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: , 2020
APPROVED BY THE STOCKHOLDERS: , 2020

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1. GENERAL.

(a) Successor to and Continuation of Prior Plans. The Plan is the successor to and continuation of the Prior Plans. As of the Effective Date, (i) no additional awards may be granted under the Prior Plans; (ii) the Prior Plans' Available Reserve plus any Returning Shares will become available for issuance pursuant to Awards granted under this Plan; and (iii) all outstanding awards granted under the Prior Plans will remain subject to the terms of the Prior Plans (except to the extent such outstanding awards result in Returning Shares that become available for issuance pursuant to Awards granted under this Plan). All Awards granted under this Plan will be subject to the terms of this Plan.

(b) Plan Purpose. The Company, by means of the Plan, seeks to secure and retain the services of Employees, Directors and Consultants, to provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate and to provide a means by which such persons may be given an opportunity to benefit from increases in value of the Common Stock through the granting of Awards.

(c) Available Awards. The Plan provides for the grant of the following Awards: (i) Incentive Stock Options; (ii) Nonstatutory Stock Options; (iii) SARs; (iv) Restricted Stock Awards; (v) RSU Awards; (vi) Performance Awards; and (vii) Other Awards.

(d) Adoption Date. The Plan will come into existence on the Adoption Date. No Award may be granted under the Plan prior to the Adoption Date. Any Award granted prior to the Effective Date is contingent upon timely receipt of stockholder approval to the extent required under applicable tax, securities and regulatory rules, and satisfaction of any other compliance requirements.

2. SHARES SUBJECT TO THE PLAN.

(a) Share Reserve. Subject to adjustment in accordance with Section 2(c) and any adjustments as necessary to implement any Capitalization Adjustments, the aggregate number of shares of Common Stock that may be issued pursuant to Awards will not exceed 125,000,000 shares, which number is the sum of: (i) new shares, plus (ii) the Prior Plans' Available Reserve, and plus (iii) the number of Returning Shares, if any, as such shares become available from time to time.

In addition, subject to any adjustments as necessary to implement any Capitalization Adjustments, such aggregate number of shares of Common Stock will automatically increase on January 1 of each calendar year for a period of ten years commencing on January 1, 2021 and ending on (and including) January 1, 2030, in a number of shares of Common Stock equal to 4% of the total number of shares of Capital Stock outstanding on December 31 of the preceding calendar year; provided, however that the Board may act prior to January 1 of a given calendar year to provide that the increase for such year will be a lesser number of shares of Common Stock.

(b) Aggregate Incentive Stock Option Limit. Notwithstanding anything to the contrary in Section 2(a) and subject to any adjustments as necessary to implement any Capitalization Adjustments, the aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options is 375,000,000 shares.

(c) Share Reserve Operation.

(i) Limit Applies to Common Stock Issued Pursuant to Awards. For clarity, the Share Reserve is a limit on the number of shares of Common Stock that may be issued pursuant to Awards and does not limit the granting of Awards, except that the Company will keep available at all times the number of shares of Common Stock reasonably required to satisfy its obligations to issue shares pursuant to such Awards. Shares may be issued in connection with a merger or acquisition as permitted by, as applicable, Nasdaq Listing Rule 5635(c), NYSE Listed Company Manual Section 303A.08, NYSE American Company Guide Section 711 or other applicable rule, and such issuance will not reduce the number of shares available for issuance under the Plan.

(ii) Actions that Do Not Constitute Issuance of Common Stock and Do Not Reduce Share Reserve. The following actions do not result in an issuance of shares under the Plan and accordingly do not reduce the number of shares subject to the Share Reserve and available for issuance under the Plan: (1) the expiration or termination of any portion of an Award without the shares covered by such portion of the Award having been issued, (2) the settlement of any portion of an Award in cash (*i.e.*, the Participant receives cash rather than Common Stock), (3) the withholding of shares that would otherwise be issued by the Company to satisfy the exercise, strike or purchase price of an Award; (4) the withholding of shares that would otherwise be issued by the Company to satisfy a tax withholding obligation in connection with an Award.

(iii) Reversion of Previously Issued Shares of Common Stock to Share Reserve. The following shares of Common Stock previously issued pursuant to an Award and accordingly initially deducted from the Share Reserve will be added back to the Share Reserve and again become available for issuance under the Plan: (1) any shares that are forfeited back to or repurchased by the Company because of a failure to meet a contingency or condition required for the vesting of such shares; (2) any shares that are reacquired by the Company to satisfy the exercise, strike or purchase price of an Award; and (3) any shares that are reacquired by the Company to satisfy a tax withholding obligation in connection with an Award.

3. ELIGIBILITY AND LIMITATIONS.

(a) Eligible Award Recipients. Subject to the terms of the Plan, Employees, Directors and Consultants are eligible to receive Awards.

(b) Specific Award Limitations.

(i) Limitations on Incentive Stock Option Recipients. Incentive Stock Options may be granted only to Employees of the Company or a "parent corporation" or "subsidiary corporation" thereof (as such terms are defined in Sections 424(e) and (f) of the Code).

(ii) Incentive Stock Option $100,000 Limitation. To the extent that the aggregate Fair Market Value (determined at the time of grant) of Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company and any Affiliates) exceeds $100,000 (or such other limit established in the Code) or otherwise does not comply with the rules governing Incentive Stock Options, the Options or portions thereof that exceed such limit (according to the order in which they were granted) or otherwise do not comply with such rules will be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(iii) Limitations on Incentive Stock Options Granted to Ten Percent Stockholders. A Ten Percent Stockholder may not be granted an Incentive Stock Option unless (i) the exercise price of such Option is at least 110% of the Fair Market Value on the date of grant of such Option and (ii) the Option is not exercisable after the expiration of five years from the date of grant of such Option.

(iv) Limitations on Nonstatutory Stock Options and SARs. Nonstatutory Stock Options and SARs may not be granted to Employees, Directors and Consultants who are providing Continuous Service only to any "parent" of the Company (as such term is defined in Rule 405) unless the stock underlying such Awards is treated as "service recipient stock" under Section 409A because the Awards are granted pursuant to a corporate transaction (such as a spin off transaction) or unless such Awards otherwise comply with the distribution requirements of Section 409A.

(c) Aggregate Incentive Stock Option Limit. The aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options is the number of shares specified in Section 2(b).

(d) Non-Employee Director Compensation Limit. The aggregate value of all compensation granted or paid, as applicable, to any individual for service as a Non-Employee Director with respect to any calendar year

that follows the calendar year in which such individual is first appointed or elected to the Board, including Awards granted and cash fees paid by the Company to such Non-Employee Director, will not exceed $500,000 in total value, and with respect to the calendar year in which a Non-Employee Director is first appointed or elected to the Board, will not exceed $1,000,000 in total value, in each case calculating the value of any equity awards based on the grant date fair value of such equity awards for financial reporting purposes.

4. OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option and SAR will have such terms and conditions as determined by the Board. Each Option will be designated in writing as an Incentive Stock Option or Nonstatutory Stock Option at the time of grant; *provided, however*, that if an Option is not so designated, then such Option will be a Nonstatutory Stock Option, and the shares purchased upon exercise of each type of Option will be separately accounted for. Each SAR will be denominated in shares of Common Stock equivalents. The terms and conditions of separate Options and SARs need not be identical; *provided, however*, that each Option Agreement and SAR Agreement will conform (through incorporation of provisions hereof by reference in the Award Agreement or otherwise) to the substance of each of the following provisions:

(a) Term. Subject to Section 3(b) regarding Ten Percent Stockholders, no Option or SAR will be exercisable after the expiration of ten years from the date of grant of such Award or such shorter period specified in the Award Agreement.

(b) Exercise or Strike Price. Subject to Section 3(b) regarding Ten Percent Stockholders, the exercise or strike price of each Option or SAR will not be less than 100% of the Fair Market Value on the date of grant of such Award. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise or strike price lower than 100% of the Fair Market Value on the date of grant of such Award if such Award is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a Corporate Transaction and in a manner consistent with the provisions of Sections 409A and, if applicable, 424(a) of the Code.

(c) Exercise Procedure and Payment of Exercise Price for Options. In order to exercise an Option, the Participant must provide notice of exercise to the Plan Administrator in accordance with the procedures specified in the Option Agreement or otherwise provided by the Company. The Board has the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to utilize a particular method of payment. The exercise price of an Option may be paid, to the extent permitted by Applicable Law and as determined by the Board, by one or more of the following methods of payment to the extent set forth in the Option Agreement:

(i) by cash or check, bank draft or money order payable to the Company;

(ii) pursuant to a "cashless exercise" program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of the Common Stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the exercise price to the Company from the sales proceeds;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock that are already owned by the Participant free and clear of any liens, claims, encumbrances or security interests, with a Fair Market Value on the date of exercise that does not exceed the exercise price, provided that (1) at the time of exercise the Common Stock is publicly traded, (2) any remaining balance of the exercise price not satisfied by such delivery is paid by the Participant in cash or other permitted form of payment, (3) such delivery would not violate any Applicable Law or agreement restricting the redemption of the Common Stock, (4) any certificated shares are endorsed or accompanied by an executed assignment separate from certificate, and (5) such shares have been held by the Participant for any minimum period necessary to avoid adverse accounting treatment as a result of such delivery;

(iv) if the Option is a Nonstatutory Stock Option, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value on the date of exercise that does not exceed the exercise price, provided that (1) such shares used to pay the exercise price will not be exercisable thereafter and (2) any remaining balance of the exercise price not satisfied by such net exercise is paid by the Participant in cash or other permitted form of payment; or

(v) in any other form of consideration that may be acceptable to the Board and permissible under Applicable Law.

(d) Exercise Procedure and Payment of Appreciation Distribution for SARs. In order to exercise any SAR, the Participant must provide notice of exercise to the Plan Administrator in accordance with the SAR Agreement. The appreciation distribution payable to a Participant upon the exercise of a SAR will not be greater than an amount equal to the excess of (i) the aggregate Fair Market Value on the date of exercise of a number of shares of Common Stock equal to the number of Common Stock equivalents that are vested and being exercised under such SAR, over (ii) the strike price of such SAR. Such appreciation distribution may be paid to the Participant in the form of Common Stock or cash (or any combination of Common Stock and cash) or in any other form of payment, as determined by the Board and specified in the SAR Agreement.

(e) Transferability. Options and SARs may not be transferred to third party financial institutions for value. The Board may impose such additional limitations on the transferability of an Option or SAR as it determines. In the absence of any such determination by the Board, the following restrictions on the transferability of Options and SARs will apply, provided that except as explicitly provided herein, neither an Option nor a SAR may be transferred for consideration and *provided, further*, that if an Option is an Incentive Stock Option, such Option may be deemed to be a Nonstatutory Stock Option as a result of such transfer:

(i) Restrictions on Transfer. An Option or SAR will not be transferable, except by will or by the laws of descent and distribution, and will be exercisable during the lifetime of the Participant only by the Participant; *provided, however*, that the Board may permit transfer of an Option or SAR in a manner that is not prohibited by applicable tax and securities laws upon the Participant's request, including to a trust if the Participant is considered to be the sole beneficial owner of such trust (as determined under Section 671 of the Code and applicable state law) while such Option or SAR is held in such trust, provided that the Participant and the trustee enter into a transfer and other agreements required by the Company.

(ii) Domestic Relations Orders. Notwithstanding the foregoing, subject to the execution of transfer documentation in a format acceptable to the Company and subject to the approval of the Board or a duly authorized Officer, an Option or SAR may be transferred pursuant to a domestic relations order.

(f) Vesting. The Board may impose such restrictions on or conditions to the vesting and/or exercisability of an Option or SAR as determined by the Board. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, vesting of Options and SARs will cease upon termination of the Participant's Continuous Service.

(g) Termination of Continuous Service for Cause. Except as explicitly otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service is terminated for Cause, the Participant's Options and SARs will terminate and be forfeited immediately upon such termination of Continuous Service, and the Participant will be prohibited from exercising any portion (including any vested portion) of such Awards on and after the date of such termination of Continuous Service and the Participant will have no further right, title or interest in such forfeited Award, the shares of Common Stock subject to the forfeited Award, or any consideration in respect of the forfeited Award.

(h) Post-Termination Exercise Period Following Termination of Continuous Service for Reasons Other than Cause. Subject to Section 4(i), if a Participant's Continuous Service terminates for any reason other

than for Cause, the Participant may exercise his or her Option or SAR to the extent vested, but only within the following period of time or, if applicable, such other period of time provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate; *provided*, *however*, that in no event may such Award be exercised after the expiration of its maximum term (as set forth in Section 4(a)):

(i) three months following the date of such termination if such termination is a termination without Cause (other than any termination due to the Participant's Disability or death);

(ii) 12 months following the date of such termination if such termination is due to the Participant's Disability;

(iii) 18 months following the date of such termination if such termination is due to the Participant's death; or

(iv) 18 months following the date of the Participant's death if such death occurs following the date of such termination but during the period such Award is otherwise exercisable (as provided in (i) or (ii) above).

Following the date of such termination, to the extent the Participant does not exercise such Award within the applicable Post-Termination Exercise Period (or, if earlier, prior to the expiration of the maximum term of such Award), such unexercised portion of the Award will terminate, and the Participant will have no further right, title or interest in terminated Award, the shares of Common Stock subject to the terminated Award, or any consideration in respect of the terminated Award.

(i) Restrictions on Exercise; Extension of Exercisability. A Participant may not exercise an Option or SAR at any time that the issuance of shares of Common Stock upon such exercise would violate Applicable Law. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service terminates for any reason other than for Cause and, at any time during the last thirty days of the applicable Post-Termination Exercise Period: (i) the exercise of the Participant's Option or SAR would be prohibited solely because the issuance of shares of Common Stock upon such exercise would violate Applicable Law, or (ii) the immediate sale of any shares of Common Stock issued upon such exercise would violate the Company's Trading Policy, then the applicable Post-Termination Exercise Period will be extended to the last day of the calendar month that commences following the date the Award would otherwise expire, with an additional extension of the exercise period to the last day of the next calendar month to apply if any of the foregoing restrictions apply at any time during such extended exercise period, generally without limitation as to the maximum permitted number of extensions; *provided*, *however*, that in no event may such Award be exercised after the expiration of its maximum term (as set forth in Section 4(a)).

(j) Non-Exempt Employees. No Option or SAR, whether or not vested, granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, will be first exercisable for any shares of Common Stock until at least six months following the date of grant of such Award. Notwithstanding the foregoing, in accordance with the provisions of the Worker Economic Opportunity Act, any vested portion of such Award may be exercised earlier than six months following the date of grant of such Award in the event of (i) such Participant's death or Disability, (ii) a Corporate Transaction in which such Award is not assumed, continued or substituted, (iii) a Change in Control, or (iv) such Participant's retirement (as such term may be defined in the Award Agreement or another applicable agreement or, in the absence of any such definition, in accordance with the Company's then current employment policies and guidelines). This Section 4(j) is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option or SAR will be exempt from his or her regular rate of pay.

(k) Whole Shares. Options and SARs may be exercised only with respect to whole shares of Common Stock or their equivalents.

5. AWARDS OTHER THAN OPTIONS AND STOCK APPRECIATION RIGHTS.

(a) Restricted Stock Awards and RSU Awards. Each Restricted Stock Award and RSU Award will have such terms and conditions as determined by the Board; *provided*, *however*, that each Restricted Stock Award Agreement and RSU Award Agreement will conform (through incorporation of the provisions hereof by reference in the Award Agreement or otherwise) to the substance of each of the following provisions:

(i) Form of Award.

(1) RSAs: To the extent consistent with the Company's Bylaws, at the Board's election, shares of Common Stock subject to a Restricted Stock Award may be (i) held in book entry form subject to the Company's instructions until such shares become vested or any other restrictions lapse, or (ii) evidenced by a certificate, which certificate will be held in such form and manner as determined by the Board. Unless otherwise determined by the Board, a Participant will have voting and other rights as a stockholder of the Company with respect to any shares subject to a Restricted Stock Award.

(2) RSUs: A RSU Award represents a Participant's right to be issued on a future date the number of shares of Common Stock that is equal to the number of restricted stock units subject to the RSU Award. As a holder of a RSU Award, a Participant is an unsecured creditor of the Company with respect to the Company's unfunded obligation, if any, to issue shares of Common Stock in settlement of such Award and nothing contained in the Plan or any RSU Agreement, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between a Participant and the Company or an Affiliate or any other person. A Participant will not have voting or any other rights as a stockholder of the Company with respect to any RSU Award (unless and until shares are actually issued in settlement of a vested RSU Award).

(ii) Consideration.

(1) RSA: A Restricted Stock Award may be granted in consideration for (A) cash or check, bank draft or money order payable to the Company, (B) past services to the Company or an Affiliate, or (C) any other form of consideration (including future services) as the Board may determine and permissible under Applicable Law.

(2) RSU: Unless otherwise determined by the Board at the time of grant, a RSU Award will be granted in consideration for the Participant's services to the Company or an Affiliate, such that the Participant will not be required to make any payment to the Company (other than such services) with respect to the grant or vesting of the RSU Award, or the issuance of any shares of Common Stock pursuant to the RSU Award. If, at the time of grant, the Board determines that any consideration must be paid by the Participant (in a form other than the Participant's services to the Company or an Affiliate) upon the issuance of any shares of Common Stock in settlement of the RSU Award, such consideration may be paid in any form of consideration as the Board may determine and permissible under Applicable Law.

(iii) Vesting. The Board may impose such restrictions on or conditions to the vesting of a Restricted Stock Award or RSU Award as determined by the Board and which may vary. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, vesting of Restricted Stock Awards and RSU Awards will cease upon termination of the Participant's Continuous Service.

(iv) Termination of Continuous Service. Except as otherwise provided in the Award Agreement or other written agreement between a Participant and the Company or an Affiliate, if a Participant's Continuous Service terminates for any reason, (i) the Company may receive through a forfeiture condition or a repurchase right any or all of the shares of Common Stock held by the Participant under his or her Restricted Stock Award that have not vested as of the date of such termination as set forth in the Restricted Stock Award Agreement and

(ii) any portion of his or her RSU Award that has not vested will be forfeited upon such termination and the Participant will have no further right, title or interest in the RSU Award, the shares of Common Stock issuable pursuant to the RSU Award, or any consideration in respect of the RSU Award.

(v) Dividends and Dividend Equivalents. Dividends or dividend equivalents may be paid or credited, as applicable, with respect to any shares of Common Stock subject to a Restricted Stock Award or RSU Award, as determined by the Board and specified in the Award Agreement).

(vi) Settlement of RSU Awards. A RSU Award may be settled by the issuance of shares of Common Stock or cash (or any combination thereof) or in any other form of payment, as determined by the Board and specified in the RSU Award Agreement. At the time of grant, the Board may determine to impose such restrictions or conditions that delay such delivery to a date following the vesting of the RSU Award.

(b) Performance Awards. With respect to any Performance Award, the length of any Performance Period, the Performance Goals to be achieved during the Performance Period, the other terms and conditions of such Award, and the measure of whether and to what degree such Performance Goals have been attained will be determined by the Board.

(c) Other Awards. Other forms of Awards valued in whole or in part by reference to, or otherwise based on, Common Stock, including the appreciation in value thereof (e.g., options or stock rights with an exercise price or strike price less than 100% of the Fair Market Value at the time of grant) may be granted either alone or in addition to Awards provided for under Section 4 and the preceding provisions of this Section 5. Subject to the provisions of the Plan, the Board will have sole and complete discretion to determine the persons to whom and the time or times at which such Other Awards will be granted, the number of shares of Common Stock (or the cash equivalent thereof) to be granted pursuant to such Other Awards and all other terms and conditions of such Other Awards.

6. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; OTHER CORPORATE EVENTS.

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board shall appropriately and proportionately adjust: (i) the class(es) and maximum number of shares of Common Stock subject to the Plan and the maximum number of shares by which the Share Reserve may annually increase pursuant to Section 2(a), (ii) the class(es) and maximum number of shares that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 2(a), and (iii) the class(es) and number of securities and exercise price, strike price or purchase price of Common Stock subject to outstanding Awards. The Board shall make such adjustments, and its determination shall be final, binding and conclusive. Notwithstanding the foregoing, no fractional shares or rights for fractional shares of Common Stock shall be created in order to implement any Capitalization Adjustment. The Board shall determine an equivalent benefit for any fractional shares or fractional shares that might be created by the adjustments referred to in the preceding provisions of this Section.

(b) Dissolution or Liquidation. Except as otherwise provided in the Award Agreement, in the event of a dissolution or liquidation of the Company, all outstanding Awards (other than Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company's right of repurchase) will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to the Company's repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by the Company notwithstanding the fact that the holder of such Award is providing Continuous Service, *provided*, *however*, that the Board may determine to cause some or all Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Awards have not previously expired or terminated) before the dissolution or liquidation is completed but contingent on its completion.

(c) Corporate Transaction. The following provisions will apply to Awards in the event of a Corporate Transaction unless otherwise provided in the instrument evidencing the Award or any other written agreement

between the Company or any Affiliate and the Participant or unless otherwise expressly provided by the Board. The Board has sole and complete discretion to determine to accelerate the vesting and exercisability of all or any Awards in the event of a Corporate Transaction.

(i) Awards May Be Assumed. In the event of a Corporate Transaction, any surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) may assume or continue any or all Awards outstanding under the Plan or may substitute similar awards for Awards outstanding under the Plan (including but not limited to, awards to acquire the same consideration paid to the stockholders of the Company pursuant to the Corporate Transaction), and any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to Awards may be assigned by the Company to the successor of the Company (or the successor's parent company, if any), in connection with such Corporate Transaction. A surviving corporation or acquiring corporation (or its parent) may choose to assume or continue only a portion of an Award or substitute a similar award for only a portion of an Award, or may choose to assume or continue the Awards held by some, but not all Participants. The terms of any assumption, continuation or substitution will be set by the Board.

(ii) Awards Held by Current Participants. In the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Awards or substitute similar awards for such outstanding Awards, then with respect to Awards that have not been assumed, continued or substituted and that are held by Participants whose Continuous Service has not terminated prior to the effective time of the Corporate Transaction (referred to as the "***Current Participants***"), the vesting of such Awards (and, with respect to Options and Stock Appreciation Rights, the time when such Awards may be exercised) will be accelerated in full to a date prior to the effective time of such Corporate Transaction (contingent upon the effectiveness of the Corporate Transaction) as the Board determines (or, if the Board does not determine such a date, to the date that is five (5) days prior to the effective time of the Corporate Transaction), and such Awards will terminate if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction, and any reacquisition or repurchase rights held by the Company with respect to such Awards will lapse (contingent upon the effectiveness of the Corporate Transaction). With respect to the vesting of Performance Awards that will accelerate upon the occurrence of a Corporate Transaction pursuant to this subsection (ii) and that have multiple vesting levels depending on the level of performance, unless otherwise provided in the Award Agreement, the vesting of such Performance Awards will accelerate at 100% of the target level upon the occurrence of the Corporate Transaction. With respect to the vesting of Awards that will accelerate upon the occurrence of a Corporate Transaction pursuant to this subsection (ii) and are settled in the form of a cash payment, such cash payment will be made no later than 30 days following the occurrence of the Corporate Transaction..

(iii) Awards Held by Persons other than Current Participants. In the event of a Corporate Transaction in which the surviving corporation or acquiring corporation (or its parent company) does not assume or continue such outstanding Awards or substitute similar awards for such outstanding Awards, then with respect to Awards that have not been assumed, continued or substituted and that are held by persons other than Current Participants, such Awards will terminate if not exercised (if applicable) prior to the occurence of the Corporate Transaction; *provided*, *however*, that any reacquisition or repurchase rights held by the Company with respect to such Awards will not terminate and may continue to be exercised notwithstanding the Corporate Transaction.

(iv) Payment for Awards in Lieu of Exercise. Notwithstanding the foregoing, in the event an Award will terminate if not exercised prior to the effective time of a Corporate Transaction, the Board may provide, in its sole discretion, that the holder of such Award may not exercise such Award but will receive a payment, in such form as may be determined by the Board, equal in value, at the effective time, to the excess, if any, of (1) the value of the property the Participant would have received upon the exercise of the Award (including, at the discretion of the Board, any unvested portion of such Award), over (2) any exercise price payable by such holder in connection with such exercise.

(d) Appointment of Stockholder Representative. As a condition to the receipt of an Award under this Plan, a Participant will be deemed to have agreed that the Award will be subject to the terms of any agreement governing a Corporate Transaction involving the Company, including, without limitation, a provision for the appointment of a stockholder representative that is authorized to act on the Participant's behalf with respect to any escrow, indemnities and any contingent consideration.

(e) No Restriction on Right to Undertake Transactions. The grant of any Award under the Plan and the issuance of shares pursuant to any Award does not affect or restrict in any way the right or power of the Company or the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, any merger or consolidation of the Company, any issue of stock or of options, rights or options to purchase stock or of bonds, debentures, preferred or prior preference stocks whose rights are superior to or affect the Common Stock or the rights thereof or which are convertible into or exchangeable for Common Stock, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

7. ADMINISTRATION.

(a) Administration by Board. The Board will administer the Plan unless and until the Board delegates administration of the Plan to a Committee or Committees, as provided in subsection (c) below.

(b) Powers of Board. The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine from time to time (1) which of the persons eligible under the Plan will be granted Awards; (2) when and how each Award will be granted; (3) what type or combination of types of Award will be granted; (4) the provisions of each Award granted (which need not be identical), including the time or times when a person will be permitted to receive an issuance of Common Stock or other payment pursuant to an Award; (5) the number of shares of Common Stock or cash equivalent with respect to which an Award will be granted to each such person; and (6) the Fair Market Value applicable to an Award.

(ii) To construe and interpret the Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan or in any Award Agreement, in a manner and to the extent it deems necessary or expedient to make the Plan or Award fully effective.

(iii) To settle all controversies regarding the Plan and Awards granted under it.

(iv) To accelerate the time at which an Award may first be exercised or the time during which an Award or any part thereof will vest, notwithstanding the provisions in the Award Agreement stating the time at which it may first be exercised or the time during which it will vest.

(v) To prohibit the exercise of any Option, SAR or other exercisable Award during a period of up to 30 days prior to the consummation of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the shares of Common Stock or the share price of the Common Stock including any Corporate Transaction, for reasons of administrative convenience.

(vi) To suspend or terminate the Plan at any time. Suspension or termination of the Plan will not Materially Impair rights and obligations under any Award granted while the Plan is in effect except with the written consent of the affected Participant.

(vii) To amend the Plan in any respect the Board deems necessary or advisable; *provided, however,* that stockholder approval will be required for any amendment to the extent required by Applicable Law. Except as provided above, rights under any Award granted before amendment of the Plan will not be Materially Impaired by any amendment of the Plan unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.

(viii) To submit any amendment to the Plan for stockholder approval.

(ix) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; *provided however*, that, a Participant's rights under any Award will not be Materially Impaired by any such amendment unless (1) the Company requests the consent of the affected Participant, and (2) such Participant consents in writing.

(x) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of the Plan or Awards.

(xi) To adopt such procedures and sub-plans as are necessary or appropriate to permit and facilitate participation in the Plan by, or take advantage of specific tax treatment for Awards granted to, Employees, Directors or Consultants who are foreign nationals or employed outside the United States (provided that Board approval will not be necessary for immaterial modifications to the Plan or any Award Agreement to ensure or facilitate compliance with the laws of the relevant foreign jurisdiction).

(xii) To effect, at any time and from time to time, subject to the consent of any Participant whose Award is Materially Impaired by such action, (1) the reduction of the exercise price (or strike price) of any outstanding Option or SAR; (2) the cancellation of any outstanding Option or SAR and the grant in substitution therefor of (A) a new Option, SAR, Restricted Stock Award, RSU Award or Other Award, under the Plan or another equity plan of the Company, covering the same or a different number of shares of Common Stock, (B) cash and/or (C) other valuable consideration (as determined by the Board); or (3) any other action that is treated as a repricing under generally accepted accounting principles.

(c) Delegation to Committee.

(i) General. The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to another Committee or a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. Each Committee may retain the authority to concurrently administer the Plan with Committee or subcommittee to which it has delegated its authority hereunder and may, at any time, revest in such Committee some or all of the powers previously delegated. The Board may retain the authority to concurrently administer the Plan with any Committee and may, at any time, revest in the Board some or all of the powers previously delegated.

(ii) Rule 16b-3 Compliance. To the extent an Award is intended to qualify for the exemption from Section 16(b) of the Exchange Act that is available under Rule 16b-3 of the Exchange Act, the Award will be granted by the Board or a Committee that consists solely of two or more Non-Employee Directors, as determined under Rule 16b-3(b)(3) of the Exchange Act and thereafter any action establishing or modifying the terms of the Award will be approved by the Board or a Committee meeting such requirements to the extent necessary for such exemption to remain available.

(d) Effect of Board's Decision. All determinations, interpretations and constructions made by the Board or any Committee in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

(e) Delegation to an Officer. The Board or any Committee may delegate to one or more Officers the authority to do one or both of the following (i) designate Employees who are not Officers to be recipients of Options and SARs (and, to the extent permitted by Applicable Law, other types of Awards) and, to the extent permitted by Applicable Law, the terms thereof, and (ii) determine the number of shares of Common Stock to be subject to such Awards granted to such Employees; provided, however, that the resolutions or charter adopted by the Board or any Committee evidencing such delegation will specify the total number of shares of Common Stock that may be subject to the Awards granted by such Officer and that such Officer may not grant an Award to himself or herself. Any such Awards will be granted on the applicable form of Award Agreement most recently approved for use by the Board or the Committee, unless otherwise provided in the resolutions approving the delegation authority. Notwithstanding anything to the contrary herein, neither the Board nor any Committee may delegate to an Officer who is acting solely in the capacity of an Officer (and not also as a Director) the authority to determine the Fair Market Value.

8. TAX WITHHOLDING

(a) Withholding Authorization. As a condition to acceptance of any Award under the Plan, a Participant authorizes withholding from payroll and any other amounts payable to such Participant, and otherwise agree to make adequate provision for (including), any sums required to satisfy any U.S. federal, state, local and/or foreign tax or social insurance contribution withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise, vesting or settlement of such Award, as applicable. Accordingly, a Participant may not be able to exercise an Award even though the Award is vested, and the Company shall have no obligation to issue shares of Common Stock subject to an Award, unless and until such obligations are satisfied.

(b) Satisfaction of Withholding Obligation. To the extent permitted by the terms of an Award Agreement, the Company may, in its sole discretion, satisfy any U.S. federal, state, local and/or foreign tax or social insurance withholding obligation relating to an Award by any of the following means or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Award; (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant; (v) by allowing a Participant to effectuate a "cashless exercise" pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board, or (vi) by such other method as may be set forth in the Award Agreement.

(c) No Obligation to Notify or Minimize Taxes; No Liability to Claims. Except as required by Applicable Law the Company has no duty or obligation to any Participant to advise such holder as to the time or manner of exercising such Award. Furthermore, the Company has no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of an Award to the holder of such Award and will not be liable to any holder of an Award for any adverse tax consequences to such holder in connection with an Award. As a condition to accepting an Award under the Plan, each Participant (i) agrees to not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from such Award or other Company compensation and (ii) acknowledges that such Participant was advised to consult with his or her own personal tax, financial and other legal advisors regarding the tax consequences of the Award and has either done so or knowingly and voluntarily declined to do so. Additionally, each Participant acknowledges any Option or SAR granted under the Plan is exempt from Section 409A only if the exercise or strike price is at least equal to the "fair market value" of the Common Stock on the date of grant as determined by the Internal Revenue Service and there is no other impermissible deferral of compensation associated with the Award. Additionally, as a condition to accepting an Option or SAR granted

under the Plan, each Participant agrees not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates in the event that the Internal Revenue Service asserts that such exercise price or strike price is less than the "fair market value" of the Common Stock on the date of grant as subsequently determined by the Internal Revenue Service.

(d) Withholding Indemnification. As a condition to accepting an Award under the Plan, in the event that the amount of the Company's and/or its Affiliate's withholding obligation in connection with such Award was greater than the amount actually withheld by the Company and/or its Affiliates, each Participant agrees to indemnify and hold the Company and/or its Affiliates harmless from any failure by the Company and/or its Affiliates to withhold the proper amount.

9. MISCELLANEOUS.

(a) Source of Shares. The stock issuable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market or otherwise.

(b) Use of Proceeds from Sales of Common Stock. Proceeds from the sale of shares of Common Stock pursuant to Awards will constitute general funds of the Company.

(c) Corporate Action Constituting Grant of Awards. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the date of such corporate action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (e.g., Board consents, resolutions or minutes) documenting the corporate action approving the grant contain terms (e.g., exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Agreement or related grant documents as a result of a clerical error in the Award Agreement or related grant documents, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Agreement or related grant documents.

(d) Stockholder Rights. No Participant will be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to such Award unless and until (i) such Participant has satisfied all requirements for exercise of the Award pursuant to its terms, if applicable, and (ii) the issuance of the Common Stock subject to such Award is reflected in the records of the Company.

(e) No Employment or Other Service Rights. Nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award granted pursuant thereto will confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or affect the right of the Company or an Affiliate to terminate at will and without regard to any future vesting opportunity that a Participant may have with respect to any Award (i) the employment of an Employee with or without notice and with or without cause, (ii) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate, or (iii) the service of a Director pursuant to the Bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state or foreign jurisdiction in which the Company or the Affiliate is incorporated, as the case may be. Further, nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award will constitute any promise or commitment by the Company or an Affiliate regarding the fact or nature of future positions, future work assignments, future compensation or any other term or condition of employment or service or confer any right or benefit under the Award or the Plan unless such right or benefit has specifically accrued under the terms of the Award Agreement and/or Plan.

(f) Change in Time Commitment. In the event a Participant's regular level of time commitment in the performance of his or her services for the Company and any Affiliates is reduced (for example, and without limitation, if the Participant is an Employee of the Company and the Employee has a change in status from a full-

time Employee to a part-time Employee or takes an extended leave of absence) after the date of grant of any Award to the Participant, the Board may determine, to the extent permitted by Applicable Law, to (i) make a corresponding reduction in the number of shares or cash amount subject to any portion of such Award that is scheduled to vest or become payable after the date of such change in time commitment, and (ii) in lieu of or in combination with such a reduction, extend the vesting or payment schedule applicable to such Award. In the event of any such reduction, the Participant will have no right with respect to any portion of the Award that is so reduced or extended.

(g) Execution of Additional Documents. As a condition to accepting an Award under the Plan, the Participant agrees to execute any additional documents or instruments necessary or desirable, as determined in the Plan Administrator's sole discretion, to carry out the purposes or intent of the Award, or facilitate compliance with securities and/or other regulatory requirements, in each case at the Plan Administrator's request.

(h) Electronic Delivery and Participation. Any reference herein or in an Award Agreement to a "written" agreement or document will include any agreement or document delivered electronically, filed publicly at www.sec.gov (or any successor website thereto) or posted on the Company's intranet (or other shared electronic medium controlled by the Company to which the Participant has access). By accepting any Award the Participant consents to receive documents by electronic delivery and to participate in the Plan through any on-line electronic system established and maintained by the Plan Administrator or another third party selected by the Plan Administrator. The form of delivery of any Common Stock (*e.g.*, a stock certificate or electronic entry evidencing such shares) shall be determined by the Company.

(i) Clawback/Recovery. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other Applicable Law and any clawback policy that the Company otherwise adopts, to the extent applicable and permissible under Applicable Law. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Board determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a Participant's right to voluntary terminate employment upon a "resignation for good reason," or for a "constructive termination" or any similar term under any plan of or agreement with the Company.

(j) Securities Law Compliance. A Participant will not be issued any shares in respect of an Award unless either (i) the shares are registered under the Securities Act; or (ii) the Company has determined that such issuance would be exempt from the registration requirements of the Securities Act. Each Award also must comply with other Applicable Law governing the Award, and a Participant will not receive such shares if the Company determines that such receipt would not be in material compliance with Applicable Law.

(k) Transfer or Assignment of Awards; Issued Shares. Except as expressly provided in the Plan or the form of Award Agreement, Awards granted under the Plan may not be transferred or assigned by the Participant. After the vested shares subject to an Award have been issued, or in the case of Restricted Stock and similar awards, after the issued shares have vested, the holder of such shares is free to assign, hypothecate, donate, encumber or otherwise dispose of any interest in such shares provided that any such actions are in compliance with the provisions herein, the terms of the Trading Policy and Applicable Law.

(l) Effect on Other Employee Benefit Plans. The value of any Award granted under the Plan, as determined upon grant, vesting or settlement, shall not be included as compensation, earnings, salaries, or other similar terms used when calculating any Participant's benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

(m) Deferrals. To the extent permitted by Applicable Law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may also establish programs and procedures for deferral elections to be made by Participants. Deferrals will be made in accordance with the requirements of Section 409A.

(n) Section 409A. Unless otherwise expressly provided for in an Award Agreement, the Plan and Award Agreements will be interpreted to the greatest extent possible in a manner that makes the Plan and the Awards granted hereunder exempt from Section 409A, and, to the extent not so exempt, in compliance with the requirements of Section 409A. If the Board determines that any Award granted hereunder is not exempt from and is therefore subject to Section 409A, the Award Agreement evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code, and to the extent an Award Agreement is silent on terms necessary for compliance, such terms are hereby incorporated by reference into the Award Agreement. Notwithstanding anything to the contrary in this Plan (and unless the Award Agreement specifically provides otherwise), if the shares of Common Stock are publicly traded, and if a Participant holding an Award that constitutes "deferred compensation" under Section 409A is a "specified employee" for purposes of Section 409A, no distribution or payment of any amount that is due because of a "separation from service" (as defined in Section 409A without regard to alternative definitions thereunder) will be issued or paid before the date that is six months and one day following the date of such Participant's "separation from service" or, if earlier, the date of the Participant's death, unless such distribution or payment can be made in a manner that complies with Section 409A, and any amounts so deferred will be paid in a lump sum on the day after such six month period elapses, with the balance paid thereafter on the original schedule.

(o) CHOICE OF LAW. This Plan and any controversy arising out of or relating to this Plan shall be governed by, and construed in accordance with, the internal laws of the State of Delaware, without regard to conflict of law principles that would result in any application of any law other than the law of the State of Delaware.

10. COVENANTS OF THE COMPANY.

(a) Compliance with Law. The Company will seek to obtain from each regulatory commission or agency, as may be deemed to be necessary, having jurisdiction over the Plan such authority as may be required to grant Awards and to issue and sell shares of Common Stock upon exercise or vesting of the Awards; *provided*, *however*, that this undertaking will not require the Company to register under the Securities Act the Plan, any Award or any Common Stock issued or issuable pursuant to any such Award. If, after reasonable efforts and at a reasonable cost, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary or advisable for the lawful issuance and sale of Common Stock under the Plan, the Company will be relieved from any liability for failure to issue and sell Common Stock upon exercise or vesting of such Awards unless and until such authority is obtained. A Participant is not eligible for the grant of an Award or the subsequent issuance of Common Stock pursuant to the Award if such grant or issuance would be in violation of any Applicable Law.

11. ADDITIONAL RULES FOR AWARDS SUBJECT TO SECTION 409A.

(a) Application. Unless the provisions of this Section of the Plan are expressly superseded by the provisions in the form of Award Agreement, the provisions of this Section shall apply and shall supersede anything to the contrary set forth in the Award Agreement for a Non-Exempt Award.

(b) Non-Exempt Awards Subject to Non-Exempt Severance Arrangements. To the extent a Non-Exempt Award is subject to Section 409A due to application of a Non-Exempt Severance Arrangement, the following provisions of this subsection (b) apply.

(i) If the Non-Exempt Award vests in the ordinary course during the Participant's Continuous Service in accordance with the vesting schedule set forth in the Award Agreement, and does not accelerate vesting under the terms of a Non-Exempt Severance Arrangement, in no event will the shares be issued in respect of such Non-Exempt Award any later than the later of: (i) December 31st of the calendar year that includes the applicable vesting date, or (ii) the 60th day that follows the applicable vesting date.

(ii) If vesting of the Non-Exempt Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with the Participant's Separation from Service, and such vesting acceleration provisions were in effect as of the date of grant of the Non-Exempt Award and, therefore, are part of the terms of such Non-Exempt Award as of the date of grant, then the shares will be earlier issued in settlement of such Non-Exempt Award upon the Participant's Separation from Service in accordance with the terms of the Non-Exempt Severance Arrangement, but in no event later than the 60th day that follows the date of the Participant's Separation from Service. However, if at the time the shares would otherwise be issued the Participant is subject to the distribution limitations contained in Section 409A applicable to "specified employees," as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six months following the date of such Participant's Separation from Service, or, if earlier, the date of the Participant's death that occurs within such six month period.

(iii) If vesting of a Non-Exempt Award accelerates under the terms of a Non-Exempt Severance Arrangement in connection with a Participant's Separation from Service, and such vesting acceleration provisions were not in effect as of the date of grant of the Non-Exempt Award and, therefore, are not a part of the terms of such Non-Exempt Award on the date of grant, then such acceleration of vesting of the Non-Exempt Award shall not accelerate the issuance date of the shares, but the shares shall instead be issued on the same schedule as set forth in the Grant Notice as if they had vested in the ordinary course during the Participant's Continuous Service, notwithstanding the vesting acceleration of the Non-Exempt Award. Such issuance schedule is intended to satisfy the requirements of payment on a specified date or pursuant to a fixed schedule, as provided under Treasury Regulations Section 1.409A-3(a)(4).

(c) Treatment of Non-Exempt Awards Upon a Corporate Transaction for Employees and Consultants. The provisions of this subsection (c) shall apply and shall supersede anything to the contrary set forth in the Plan with respect to the permitted treatment of any Non-Exempt Award in connection with a Corporate Transaction if the Participant was either an Employee or Consultant upon the applicable date of grant of the Non-Exempt Award.

(i) Vested Non-Exempt Awards. The following provisions shall apply to any Vested Non-Exempt Award in connection with a Corporate Transaction:

(1) If the Corporate Transaction is also a Section 409A Change in Control then the Acquiring Entity may not assume, continue or substitute the Vested Non- Exempt Award. Upon the Section 409A Change of Control the settlement of the Vested Non-Exempt Award will automatically be accelerated and the shares will be immediately issued in respect of the Vested Non-Exempt Award. Alternatively, the Company may instead provide that the Participant will receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to the Participant upon the Section 409A Change of Control.

(2) If the Corporate Transaction is not also a Section 409A Change of Control, then the Acquiring Entity must either assume, continue or substitute each Vested Non-Exempt Award. The shares to be issued in respect of the Vested Non-Exempt Award shall be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Corporate Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of the Fair Market Value of the shares made on the date of the Corporate Transaction.

(ii) Unvested Non-Exempt Awards. The following provisions shall apply to any Unvested Non-Exempt Award unless otherwise determined by the Board pursuant to subsection (e) of this Section.

(1) In the event of a Corporate Transaction, the Acquiring Entity shall assume, continue or substitute any Unvested Non-Exempt Award. Unless otherwise determined by the Board, any Unvested Non-Exempt Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Corporate Transaction. The shares to be issued in respect of any Unvested Non-Exempt Award shall be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Corporate Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of Fair Market Value of the shares made on the date of the Corporate Transaction.

(2) If the Acquiring Entity will not assume, substitute or continue any Unvested Non-Exempt Award in connection with a Corporate Transaction, then such Award shall automatically terminate and be forfeited upon the Corporate Transaction with no consideration payable to any Participant in respect of such forfeited Unvested Non-Exempt Award. Notwithstanding the foregoing, to the extent permitted and in compliance with the requirements of Section 409A, the Board may in its discretion determine to elect to accelerate the vesting and settlement of the Unvested Non-Exempt Award upon the Corporate Transaction, or instead substitute a cash payment equal to the Fair Market Value of such shares that would otherwise be issued to the Participant, as further provided in subsection (e)(ii) below. In the absence of such discretionary election by the Board, any Unvested Non-Exempt Award shall be forfeited without payment of any consideration to the affected Participants if the Acquiring Entity will not assume, substitute or continue the Unvested Non-Exempt Awards in connection with the Corporate Transaction.

(3) The foregoing treatment shall apply with respect to all Unvested Non-Exempt Awards upon any Corporate Transaction, and regardless of whether or not such Corporate Transaction is also a Section 409A Change of Control.

(d) Treatment of Non-Exempt Awards Upon a Corporate Transaction for Non-Employee Directors. The following provisions of this subsection (d) shall apply and shall supersede anything to the contrary that may be set forth in the Plan with respect to the permitted treatment of a Non-Exempt Director Award in connection with a Corporate Transaction.

(i) If the Corporate Transaction is also a Section 409A Change of Control then the Acquiring Entity may not assume, continue or substitute the Non-Exempt Director Award. Upon the Section 409A Change of Control the vesting and settlement of any Non-Exempt Director Award will automatically be accelerated and the shares will be immediately issued to the Participant in respect of the Non-Exempt Director Award. Alternatively, the Company may provide that the Participant will instead receive a cash settlement equal to the Fair Market Value of the shares that would otherwise be issued to the Participant upon the Section 409A Change of Control pursuant to the preceding provision.

(ii) If the Corporate Transaction is not also a Section 409A Change of Control, then the Acquiring Entity must either assume, continue or substitute the Non-Exempt Director Award. Unless otherwise determined by the Board, the Non-Exempt Director Award will remain subject to the same vesting and forfeiture restrictions that were applicable to the Award prior to the Corporate Transaction. The shares to be issued in respect of the Non-Exempt Director Award shall be issued to the Participant by the Acquiring Entity on the same schedule that the shares would have been issued to the Participant if the Corporate Transaction had not occurred. In the Acquiring Entity's discretion, in lieu of an issuance of shares, the Acquiring Entity may instead substitute a cash payment on each applicable issuance date, equal to the Fair Market Value of the shares that would otherwise be issued to the Participant on such issuance dates, with the determination of Fair Market Value made on the date of the Corporate Transaction.

(e) If the RSU Award is a Non-Exempt Award, then the provisions in this Section 11(e) shall apply and supersede anything to the contrary that may be set forth in the Plan or the Award Agreement with respect to the permitted treatment of such Non-Exempt Award:

(i) Any exercise by the Board of discretion to accelerate the vesting of a Non-Exempt Award shall not result in any acceleration of the scheduled issuance dates for the shares in respect of the Non-Exempt Award unless earlier issuance of the shares upon the applicable vesting dates would be in compliance with the requirements of Section 409A.

(ii) The Company explicitly reserves the right to earlier settle any Non-Exempt Award to the extent permitted and in compliance with the requirements of Section 409A, including pursuant to any of the exemptions available in Treasury Regulations Section 1.409A-3(j)(4)(ix).

(iii) To the extent the terms of any Non-Exempt Award provide that it will be settled upon a Change in Control or Corporate Transaction, to the extent it is required for compliance with the requirements of Section 409A, the Change in Control or Corporate Transaction event triggering settlement must also constitute a Section 409A Change of Control. To the extent the terms of a Non-Exempt Award provides that it will be settled upon a termination of employment or termination of Continuous Service, to the extent it is required for compliance with the requirements of Section 409A, the termination event triggering settlement must also constitute a Separation From Service. However, if at the time the shares would otherwise be issued to a Participant in connection with a "separation from service" such Participant is subject to the distribution limitations contained in Section 409A applicable to "specified employees," as defined in Section 409A(a)(2)(B)(i) of the Code, such shares shall not be issued before the date that is six months following the date of the Participant's Separation From Service, or, if earlier, the date of the Participant's death that occurs within such six month period.

(iv) The provisions in this subsection (e) for delivery of the shares in respect of the settlement of a RSU Award that is a Non-Exempt Award are intended to comply with the requirements of Section 409A so that the delivery of the shares to the Participant in respect of such Non-Exempt Award will not trigger the additional tax imposed under Section 409A, and any ambiguities herein will be so interpreted.

12. SEVERABILITY.

If all or any part of the Plan or any Award Agreement is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity shall not invalidate any portion of the Plan or such Award Agreement not declared to be unlawful or invalid. Any Section of the Plan or any Award Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

13. TERMINATION OF THE PLAN.

The Board may suspend or terminate the Plan at any time.

No Incentive Stock Options may be granted after the tenth anniversary of the earlier of: (i) the Adoption Date, or (ii) the Effective Date.

No Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

14. DEFINITIONS.

As used in the Plan, the following definitions apply to the capitalized terms indicated below:

(a) "***Acquiring Entity***" means the surviving or acquiring corporation (or its parent company) in connection with a Corporate Transaction.

(b) ***Adoption Date***" means the date the Plan is first approved by the Board or Compensation Committee.

(c) "***Affiliate***" means, at the time of determination, any "parent" or "subsidiary" of the Company as such terms are defined in Rule 405 promulgated under the Securities Act. The Board may determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(d) "***Applicable Law***" means shall mean any applicable securities, federal, state, foreign, material local or municipal or other law, statute, constitution, principle of common law, resolution, ordinance, code, edict, decree, rule, listing rule, regulation, judicial decision, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Body (including under the authority of any applicable self-regulating organization such as the Nasdaq Stock Market, New York Stock Exchange, or the Financial Industry Regulatory Authority).

(e) "***Award***" means any right to receive Common Stock, cash or other property granted under the Plan (including an Incentive Stock Option, a Nonstatutory Stock Option, a Restricted Stock Award, a RSU Award, a SAR, a Performance Award or any Other Award).

(f) "***Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Award. The Award Agreement generally consists of the Grant Notice and the agreement containing the written summary of the general terms and conditions applicable to the Award and which is provided to a Participant along with the Grant Notice.

(g) "***Board***" means the Board of Directors of the Company (or its designee). Any decision or determination made by the Board shall be a decision or determination that is made in the sole discretion of the Board (or its designee), and such decision or determination shall be final and binding on all Participants.

(h) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Award after the Effective Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or any similar equity restructuring transaction, as that term is used in Statement of Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(i) "***Cause***" has the meaning ascribed to such term in any written agreement between the Participant and the Company defining such term and, in the absence of such agreement, such term means, with respect to a Participant, the occurrence of any of the following events: (i) such Participant's commission of any crime involving fraud, dishonesty or moral turpitude or attempted commission of, or participation in, a fraud or act of dishonesty against the Company; (ii) such Participant's intentional, material violation of any contract or agreement between the Participant and the Company or of any statutory duty owed to the Company; (iii) such Participant's unauthorized use or disclosure of the Company's confidential information or trade secrets; or (iv) such Participant's gross misconduct, conduct that constitutes gross insubordination, incompetence or habitual neglect of duties and that results in (or might have reasonably resulted in) material harm to the business of the Company. The determination that a termination of the Participant's Continuous Service is either for Cause or without Cause will be made by the Board with respect to Participants who are executive officers of the Company and by the Company's Chief Executive Officer with respect to Participants who are not executive officers of the Company. Any determination by the Company that the Continuous Service of a Participant was terminated with or without Cause for the purposes of outstanding Awards held by such Participant will have no effect upon any determination of the rights or obligations of the Company or such Participant for any other purpose.

(j) "***Change in Control***" or "***Change of Control***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events; provided, however, to the extent

necessary to avoid adverse personal income tax consequences to the Participant in connection with an Award, also constitutes a Section 409A Change of Control:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control shall not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company, (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities, or (C) solely because the level of Ownership held by any Exchange Act Person (the "*Subject Person*") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control shall be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than 50% of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than 50% of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction;

(iii) the stockholders of the Company approve or the Board approves a plan of complete dissolution or liquidation of the Company, or a complete dissolution or liquidation of the Company shall otherwise occur, except for a liquidation into a parent corporation;

(iv) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than 50% of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; or

(v) individuals who, on the date the Plan is adopted by the Board, are members of the Board (the "***Incumbent Board***") cease for any reason to constitute at least a majority of the members of the Board; *provided, however*, that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member shall, for purposes of this Plan, be considered as a member of the Incumbent Board.

Notwithstanding the foregoing or any other provision of this Plan, (A) the term Change in Control shall not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company, and (B) the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant shall supersede the foregoing definition with respect to Awards subject to such agreement; *provided, however*, that if no definition of Change in Control or any analogous term is set forth in such an individual written agreement, the foregoing definition shall apply.

(k) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(l) "***Committee***" means the Compensation Committee and any other committee of Directors to whom authority has been delegated by the Board or Compensation Committee in accordance with the Plan.

(m) "***Common Stock***" means the common stock of the Company.

(n) "***Company***" means Tarveda Therapeutics, Inc., a Delaware corporation.

(o) ***"Compensation Committee"*** means the Compensation Committee of the Board.

(p) "***Consultant***" means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company's securities to such person.

(q) "***Continuous Service***" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Director or Consultant or a change in the Entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, will not terminate a Participant's Continuous Service; *provided*, *however*, that if the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board, such Participant's Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. For example, a change in status from an Employee of the Company to a Consultant of an Affiliate or to a Director will not constitute an interruption of Continuous Service. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service will be considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer, including sick leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. Notwithstanding the foregoing, a leave of absence will be treated as Continuous Service for purposes of vesting in an Award only to such extent as may be provided in the Company's leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law. In addition, to the extent required for exemption from or compliance with Section 409A, the determination of whether there has been a termination of Continuous Service will be made, and such term will be construed, in a manner that is consistent with the definition of "separation from service" as defined under Treasury Regulation Section 1.409A-1(h) (without regard to any alternative definition thereunder).

(r) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board, of the consolidated assets of the Company and its Subsidiaries;

(ii) a sale or other disposition of at least 50% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(s) "***Director***" means a member of the Board.

(t) ***"determine" or "determined"*** means as determined by the Board or the Committee (or its designee) in its sole discretion.

(u) "***Disability***" means, with respect to a Participant, such Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months, as provided in Section 22(e)(3) of the Code, and will be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(v) "***Effective Date***" means the date of the 2020 annual meeting of the Company's stockholders, provided this Plan is approved by the Company's stockholders on such date.

(w) "***Employee***" means any person employed by the Company or an Affiliate. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(x) "***Employer***" means the Company or the Affiliate of the Company that employs the Participant.

(y) "***Entity***" means a corporation, partnership, limited liability company or other entity.

(z) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(aa) "***Exchange Act Person***" means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date, is the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities.

(bb) "***Fair Market Value***" means, as of any date, unless otherwise determined by the Board, the value of the Common Stock (as determined on a per share or aggregate basis, as applicable) determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value will be the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) If there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing selling price on the last preceding date for which such quotation exists.

(iii) In the absence of such markets for the Common Stock, or if otherwise determined by the Board, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(cc) "***Governmental Body***" means any: (a) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (b) federal, state, local, municipal, foreign or other

government; (c) governmental or regulatory body, or quasi-governmental body of any nature (including any governmental division, department, administrative agency or bureau, commission, authority, instrumentality, official, ministry, fund, foundation, center, organization, unit, body or Entity and any court or other tribunal, and for the avoidance of doubt, any Tax authority) or other body exercising similar powers or authority; or (d) self-regulatory organization (including the Nasdaq Stock Market, New York Stock Exchange, and the Financial Industry Regulatory Authority).

(dd) ***"Grant Notice"*** means the notice provided to a Participant that he or she has been granted an Award under the Plan and which includes the name of the Participant, the type of Award, the date of grant of the Award, number of shares of Common Stock subject to the Award or potential cash payment right, (if any), the vesting schedule for the Award (if any) and other key terms applicable to the Award.

(ee) "***Incentive Stock Option***" means an option granted pursuant to Section 4 of the Plan that is intended to be, and qualifies as, an "incentive stock option" within the meaning of Section 422 of the Code.

(ff) ***"Materially Impair"*** means any amendment to the terms of the Award that materially adversely affects the Participant's rights under the Award. A Participant's rights under an Award will not be deemed to have been Materially Impaired by any such amendment if the Board, in its sole discretion, determines that the amendment, taken as a whole, does not materially impair the Participant's rights. For example, the following types of amendments to the terms of an Award do not Materially Impair the Participant's rights under the Award: (i) imposition of reasonable restrictions on the minimum number of shares subject to an Option that may be exercised, (ii) to maintain the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (iii) to change the terms of an Incentive Stock Option in a manner that disqualifies, impairs or otherwise affects the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (iv) to clarify the manner of exemption from, or to bring the Award into compliance with or qualify it for an exemption from, Section 409A; or (v) to comply with other Applicable Laws.

(gg) "***Non-Employee Director***" means a Director who either (i) is not a current employee or officer of the Company or an Affiliate, does not receive compensation, either directly or indirectly, from the Company or an Affiliate for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act ("***Regulation S-K***")), does not possess an interest in any other transaction for which disclosure would be required under Item 404(a) of Regulation S-K, and is not engaged in a business relationship for which disclosure would be required pursuant to Item 404(b) of Regulation S-K; or (ii) is otherwise considered a "non-employee director" for purposes of Rule 16b-3.

(hh) ***"Non-Exempt Award"*** means any Award that is subject to, and not exempt from, Section 409A, including as the result of (i) a deferral of the issuance of the shares subject to the Award which is elected by the Participant or imposed by the Company, (ii) the terms of any Non-Exempt Severance Agreement.

(ii) ***"Non-Exempt Director Award"*** means a Non-Exempt Award granted to a Participant who was a Director but not an Employee on the applicable grant date.

(jj) ***"Non-Exempt Severance Arrangement"*** means a severance arrangement or other agreement between the Participant and the Company that provides for acceleration of vesting of an Award and issuance of the shares in respect of such Award upon the Participant's termination of employment or separation from service (as such term is defined in Section 409A(a)(2)(A)(i) of the Code (and without regard to any alternative definition thereunder) ("***Separation from Service***")) and such severance benefit does not satisfy the requirements for an exemption from application of Section 409A provided under Treasury Regulations Section 1.409A-1(b)(4), 1.409A-1(b)(9) or otherwise.

(kk) "***Nonstatutory Stock Option***" means any option granted pursuant to Section 4 of the Plan that does not qualify as an Incentive Stock Option.

(ll) "***Officer***" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(mm) "***Option***" means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

(nn) "***Option Agreement***" means a written agreement between the Company and the Optionholder evidencing the terms and conditions of the Option grant. The Option Agreement includes the Grant Notice for the Option and the agreement containing the written summary of the general terms and conditions applicable to the Option and which is provided to a Participant along with the Grant Notice. Each Option Agreement will be subject to the terms and conditions of the Plan.

(oo) "***Optionholder***" means a person to whom an Option is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Option.

(pp) "***Other Award***" means an award based in whole or in part by reference to the Common Stock which is granted pursuant to the terms and conditions of Section 5(c).

(qq) "***Other Award Agreement***" means a written agreement between the Company and a holder of an Other Award evidencing the terms and conditions of an Other Award grant. Each Other Award Agreement will be subject to the terms and conditions of the Plan.

(rr) "***Own,***" "***Owned,***" "***Owner,***" "***Ownership***" means that a person or Entity will be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(ss) "***Participant***" means an Employee, Director or Consultant to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Award.

(tt) "***Performance Award***" means an Award that may vest or may be exercised or a cash award that may vest or become earned and paid contingent upon the attainment during a Performance Period of certain Performance Goals and which is granted under the terms and conditions of Section 5(b) pursuant to such terms as are approved by the Board. In addition, to the extent permitted by Applicable Law and set forth in the applicable Award Agreement, the Board may determine that cash or other property may be used in payment of Performance Awards. Performance Awards that are settled in cash or other property are not required to be valued in whole or in part by reference to, or otherwise based on, the Common Stock.

(uu) "***Performance Criteria***" means the one or more criteria that the Board will select for purposes of establishing the Performance Goals for a Performance Period. The Performance Criteria that will be used to establish such Performance Goals may be based on any measure of performance selected by the Board.

(vv) "***Performance Goals***" means, for a Performance Period, the one or more goals established by the Board for the Performance Period based upon the Performance Criteria. Performance Goals may be based on a Company-wide basis, with respect to one or more business units, divisions, Affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise by the Board (i) in the Award Agreement at the time the Award is granted or (ii) in such other document setting forth the Performance Goals at the time the Performance Goals are established, the Board will appropriately make adjustments in the method of calculating the attainment of Performance Goals for a Performance Period as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax

rates; (5) to exclude the effects of items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by the Company achieved performance objectives at targeted levels during the balance of a Performance Period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of common stock of the Company by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock based compensation and the award of bonuses under the Company's bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to expensed under generally accepted accounting principles; and (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles. In addition, the Board retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of Performance Goals and to define the manner of calculating the Performance Criteria it selects to use for such Performance Period. Partial achievement of the specified criteria may result in the payment or vesting corresponding to the degree of achievement as specified in the Award Agreement or the written terms of a Performance Cash Award.

(ww) "***Performance Period***" means the period of time selected by the Board over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant's right to vesting or exercise of an Award. Performance Periods may be of varying and overlapping duration, at the sole discretion of the Board.

(xx) "***Plan***" means this Tarveda Therapeutics, Inc. 2020 Equity Incentive Plan, as amended from time to time.

(yy) ***"Plan Administrator"*** means the person, persons, and/or third-party administrator designated by the Company to administer the day to day operations of the Plan and the Company's other equity incentive programs.

(zz) "***Post-Termination Exercise Period***" means the period following termination of a Participant's Continuous Service within which an Option or SAR is exercisable, as specified in Section 4(h).

(aaa) "***Prior Plans' Available Reserve***" means the number of shares available for the grant of new awards under all of the Prior Plans, to the extent applicable, as of immediately prior to the Effective Date.

(bbb) "***Prior Plans***" means collectively the Tarveda Therapeutics, Inc. 2011 Stock Incentive Plan, the Organovo Holdings, Inc. 2012 Equity Incentive Plan, and the Organovo Holdings, Inc. 2008 Equity Incentive Plan, each as amended.

(ccc) "***Prospectus***" means the document containing the Plan information specified in Section 10(a) of the Securities Act.

(ddd) "***Restricted Stock Award***" or "***RSA***" means an Award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 5(a).

(eee) "***Restricted Stock Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Award evidencing the terms and conditions of a Restricted Stock Award grant. The Restricted Stock Award Agreement includes the Grant Notice for the Restricted Stock Award and the agreement containing the written summary of the general terms and conditions applicable to the Restricted Stock Award and which is provided to a Participant along with the Grant Notice. Each Restricted Stock Award Agreement will be subject to the terms and conditions of the Plan.

(fff) "***Returning Shares***" means shares subject to outstanding stock awards granted under the Prior Plans and that following the Effective Date: (A) are not issued because such stock award or any portion thereof expires or otherwise terminates without all of the shares covered by such stock award having been issued; (B) are not issued because such stock award or any portion thereof is settled in cash; (C) are forfeited back to or repurchased by the Company because of the failure to meet a contingency or condition required for the vesting of such shares; (D) are withheld or reacquired to satisfy the exercise, strike or purchase price; or (E) are withheld or reacquired to satisfy a tax withholding obligation.

(ggg) "***RSU Award***" or "***RSU***" means an Award of restricted stock units representing the right to receive an issuance of shares of Common Stock which is granted pursuant to the terms and conditions of Section 5(a).

(hhh) "***RSU Award Agreement***" means a written agreement between the Company and a holder of a RSU Award evidencing the terms and conditions of a RSU Award grant. The RSU Award Agreement includes the Grant Notice for the RSU Award and the agreement containing the written summary of the general terms and conditions applicable to the RSU Award and which is provided to a Participant along with the Grant Notice. Each RSU Award Agreement will be subject to the terms and conditions of the Plan.

(iii) "***Rule 16b-3***" means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

(jjj) "***Rule 405***" means Rule 405 promulgated under the Securities Act.

(kkk) "***Section 409A***" means Section 409A of the Code and the regulations and other guidance thereunder.

(lll) "***Section 409A Change of Control***" means a change in the ownership or effective control of the Company, or in the ownership of a substantial portion of the Company's assets, as provided in Section 409A(a)(2)(A)(v) of the Code and Treasury Regulations Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder).

(mmm) ***"Securities Act***" means the Securities Act of 1933, as amended.

(nnn) ***"Share Reserve"*** means the number of shares available for issuance under the Plan as set forth in Section 2(a).

(ooo) "***Stock Appreciation Right***" or "***SAR***" means a right to receive the appreciation on Common Stock that is granted pursuant to the terms and conditions of Section 4.

(ppp) "***SAR Agreement***" means a written agreement between the Company and a holder of a SAR evidencing the terms and conditions of a SAR grant. The SAR Agreement includes the Grant Notice for the SAR and the agreement containing the written summary of the general terms and conditions applicable to the SAR and which is provided to a Participant along with the Grant Notice. Each SAR Agreement will be subject to the terms and conditions of the Plan.

(qqq) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than 50% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than 50%.

(rrr) "***Ten Percent Stockholder***" means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or any Affiliate.

(sss) "***Trading Policy***" means the Company's policy permitting certain individuals to sell Company shares only during certain "window" periods and/or otherwise restricts the ability of certain individuals to transfer or encumber Company shares, as in effect from time to time.

(ttt) "***Unvested Non-Exempt Award***" means the portion of any Non-Exempt Award that had not vested in accordance with its terms upon or prior to the date of any Corporate Transaction.

(uuu) "***Vested Non-Exempt Award***" means the portion of any Non-Exempt Award that had vested in accordance with its terms upon or prior to the date of a Corporate Transaction.