

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**AMENDMENT NO. 3 TO  
SCHEDULE TO  
TENDER OFFER STATEMENT UNDER SECTION 14(d)(1) OR 13(e)(1)  
OF THE SECURITIES EXCHANGE ACT OF 1934**

**ORGANOVO HOLDINGS, INC.**

(Name of Subject Company (Issuer) and Filing Person (Offeror))

**WARRANTS TO PURCHASE COMMON STOCK**  
(Title of Class of Securities)  
**68620A 104**  
(CUSIP Number of Common Stock Underlying Warrants)

**Keith Murphy**  
Chief Executive Officer and President  
6275 Nancy Ridge Drive  
San Diego, California 92121  
Phone: (858) 550-9994

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications on Behalf of Filing Person)

**WITH COPY TO:**

**Jeff Thacker, Esq.**  
DLA Piper LLP (US)  
4365 Executive Drive, Suite 1100  
San Diego, California 92121  
Tel: (858) 677-1400  
Fax: (858) 677-1401

**CALCULATION OF FILING FEE:**

Transaction valuation(1)	Amount of filing fee(1)(2)
\$34,100,681	\$4,652

- (1) Estimated for purposes of calculating the amount of the filing fee only. An offer to amend and exercise warrants to purchase an aggregate of 14,510,928 shares of common stock (the "Offer to Amend and Exercise"), including: (i) outstanding warrants to purchase 1,500,000 shares of the Company's common stock issued to investors participating in the Company's bridge financing completed in November 2011; (ii) outstanding warrants to purchase 11,653,678 shares of the Company's common stock issued to investors participating in the Company's private placement financings closed on February 8, 2012, February 29, 2012 and March 16, 2012; and (iii) outstanding warrants to purchase 1,357,250 shares of the Company's common stock issued to investors in the Company's private placement transactions completed in 2011. The transaction value is calculated pursuant to Rule 0-11 using \$2.35 per share of common stock, which represents the average of the high and low sales price of the common stock on November 13, 2012.
- (2) Calculated by multiplying the transaction value by 0.0001364.

- Check the box if any part of the fee is offset as provided by Rule 0-11(a)(2) and identify the filing with which the offsetting fee was previously paid. Identify the previous filing by registration statement number or the Form or Schedule and the date of its filing.

Amount Previously Paid: \$4,652  
Form or Registration Number: 005-86817

Filing Party: Organovo Holdings, Inc.  
Date Filed: November 16, 2012

- Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

Check the appropriate boxes below to designate any transactions to which the statement relates:

- third party tender offer subject to Rule 14d-1.  
 issuer tender offer subject to Rule 13e-4.  
 going private transaction subject to Rule 13e-3.  
 amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of a tender offer:

The alphabetical subsections used in the Item responses below correspond to the alphabetical subsections of the applicable items of Regulation M-A promulgated under the federal securities laws.

If applicable, check the appropriate box(es) below to designate the appropriate note provision(s):

- Rule 13e-4(i) (Cross-Border Issuer Tender Offer)  
 Rule 14d-1(d) (Cross-Border Third-Party Tender Offer)

## **Explanatory Note**

This Amendment No. 3 (this “Amendment No. 3”) amends and supplements the Tender Offer Statement on Schedule TO originally filed with the Securities and Exchange Commission (the “SEC”) on November 16, 2012 (the “Original Schedule TO”), as previously amended by Amendment No. 1 filed with the SEC on November 23, 2012 (“Amendment No. 1”) and Amendment No. 2 filed with the SEC on December 5, 2012 (“Amendment No. 2” and together with the Original Schedule TO and Amendment No. 1, the “Schedule TO”) relating to an offer by Organovo Holdings, Inc. (the “Company”) to amend warrants to purchase an aggregate of 14,510,928 shares of common stock, including: (i) outstanding warrants to purchase 1,500,000 shares of the Company’s common stock issued to investors participating in the Company’s bridge financing completed in November 2011; (ii) outstanding warrants to purchase 11,653,678 shares of the Company’s common stock issued to investors participating in the Company’s private placement financings closed on February 8, 2012, February 29, 2012 and March 16, 2012; and (iii) outstanding warrants to purchase 1,357,250 shares of the Company’s common stock issued to investors in the Company’s private placement transactions completed in 2011, upon the terms and subject to the conditions set forth in the Offer To Amend and Exercise Warrants to Purchase Common Stock, dated November 16 2012, and as amended and supplemented by Amendment No. 1, Amendment No. 2 and this Amendment No. 3, and filed as Exhibit (a)(1)(B) to the Schedule TO (the “Offer to Amend and Exercise”).

Pursuant to Rule 12b-15 under the Securities and Exchange Act of 1934, as amended, this Amendment No. 3 amends and restates only the items of the Schedule TO that are being amended and restated hereby, and unaffected items and exhibits in the Schedule TO are not included herein. This Amendment No. 3 should be read in conjunction with the Schedule TO and the related Offering Materials, as the same may be further amended or supplemented hereafter and filed with the SEC. All terms used herein have the same meaning as in the Offer to Amend and Exercise.

### **Item 1. SUMMARY TERM SHEET**

### **Item 4. TERMS OF TRANSACTION**

This Amendment No. 3 amends and supplements Items 1 and 4 of this Schedule TO as follows:

#### **Extension of the Offer to Amend and Exercise**

We are extending the Expiration Date of the Offer to Amend and Exercise until 5:00 p.m. Pacific Time on December 21, 2012, unless further extended. The Offer had been previously scheduled to expire at 5:00 p.m. Pacific Time on December 17, 2012. Throughout the Schedule TO, the Offer to Amend and Exercise and the other Offering Materials and Acceptance and Exercise Documents, all references to the Expiration Date of the Offer to Amend and Exercise are hereby amended to extend the Expiration Date of the Offer to Amend and Exercise until 5:00 p.m. Pacific Time on December 21, 2012.

On or about December 17, 2012, we intend to advise the holders of Original Warrants of the extension of the Offer to Amend and Exercise by mail and email communications. Copies of the letter and email to be sent to holders of Original Warrants are attached hereto as Exhibits (a)(1)(K) and (a)(1)(L), and are hereby incorporated herein by reference.

#### **Shortened Lock-Up Period**

We are shortening the Lock-Up Period so that it will now expire at 5:00 p.m. Pacific Time on January 3, 2013. The Lock-Up Period had previously been scheduled to expire on the date that is twenty (20) days after the Expiration Date. Throughout the Schedule TO, the Offer to Amend and Exercise and the other Offering Materials and Acceptance and Exercise Documents, all references to the Lock-Up Period expiring on the date that is twenty

(20) days after the Expiration Date are hereby deleted and replaced with references to the Lock-Up Period expiring at 5:00 p.m. Pacific Time on January 3, 2013.

### Clarification of Withdrawal Rights

If you change your mind and do not want to participate in the Offer to Amend and Exercise, you may submit a Notice of Withdrawal to the Company at any time prior to the Expiration Date, which is now December 21, 2012. The Notice of Withdrawal must be properly completed and must be returned to the Company on or prior to the Expiration Date. In addition, you may change your mind and submit a Notice of Withdrawal to us after January 15, 2013, if your Original Warrants and other Acceptance and Exercise Documents have not been accepted by us prior to January 15, 2013. The Schedule TO, the Offer to Amend and Exercise and the other Offering Materials and Acceptance and Exercise Documents erroneously referenced such dates as January 16, 2013. Accordingly, throughout the Schedule TO, the Offer to Amend and Exercise and the other Offering Materials and Acceptance and Exercise Documents, all references to January 16, 2013 are hereby deleted and replaced with references to January 15, 2013.

### Item 12. EXHIBITS.

Item 12 Exhibits to the Schedule TO is amended and restated as follows:

The following are attached as exhibits to this Schedule TO:

- (a) (1)(A) Letter to Holders of Original Warrants, as amended on December 4, 2012\*
- (1)(B) Offer to Amend and Exercise, as amended on December 4, 2012\*
- (1)(C) Form of Election to Participate and Exercise Warrant, as amended on December 4, 2012\*
- (1)(D) Form of Notice of Withdrawal, as amended on December 4, 2012\*
- (1)(E) Form of Bridge Amended Warrant, as amended on December 4, 2012\*
- (1)(F) Form of Investor Amended Warrant, as amended on December 4, 2012\*
- (1)(G) Form of Private Amended Warrant, as amended on December 4, 2012\*
- (1)(H) Supplemental Company Information, dated December 4, 2012\*
- (1)(I) Supplemental Letter to Holders of Original Warrants, dated December 4, 2012\*
- (1)(K) Letter to Holders of Original Warrants, dated December 17, 2012.
- (1)(L) E-mail correspondence to Holders of Original Warrants, dated December 17, 2012.
- (5)(A) Current Report on Form 8-K/A containing audited financial statements for the fiscal years ended December 31, 2011 and 2010 (as filed with the SEC on May 11, 2012 and incorporated herein by reference)\*
- (5)(B) Report on Form 10-Q for the quarter ended March 31, 2012 (as filed with the SEC on May 15, 2012 and incorporated herein by reference)\*
- (5)(C) Report on Form 10-Q for the quarter ended June 30, 2012 (as filed with the SEC on August 14, 2012 and incorporated herein by reference)\*
- (5)(D) Report on Form 10-Q for the quarter ended September 30, 2012 (as filed with the SEC on November 13, 2012 and incorporated herein by reference)\*
- (5)(E) Form of Bridge Warrant of Organovo Holdings, Inc. (incorporated by reference to Exhibit 4.1 to the Company' Current Report on Form 8-K, as filed with the SEC on February 13, 2012)\*

- (5)(F) Form of Investor Warrant of Organovo Holdings, Inc. (incorporated by reference to Exhibit 4.4 to the Company' Current Report on Form 8-K, as filed with the SEC on February 13, 2012)\*
- (5)(G) Form of Private Warrant of Organovo Holdings, Inc. (incorporated by reference to Exhibit 4.3 to the Company' Current Report on Form 8-K, as filed with the SEC on February 14, 2012)\*
- (5)(H) Registration Statement on Form S-1 (File No. 333-182101), which registers the resale of the shares of common stock underlying the Bridge and Investor Warrants (as declared effective and filed with the SEC on July 6, 2012 and incorporated herein by reference)\*
- (5)(I) Current Report on Form 8-K containing an investor presentation regarding the Company (as filed with the SEC on November 23, 2012 and incorporated herein by reference)\*

\* Previously filed.

**SIGNATURE**

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

ORGANOVO HOLDINGS, INC.

By: /s/ Keith Murphy  
Name: Keith Murphy  
Title: Chief Executive Officer and President  
(Principal Executive Officer)

Date: December 17, 2012

December 17, 2012

To the Holders of Original Warrants:

Please note that, due in part to the need to offer additional processing time to certain holders of Original Warrants who have notified us that they intend to exercise their Original Warrants, we have decided to extend the expiration date for our pending offer to amend and exercise the warrants to purchase an aggregate of 14,510,928 shares of common stock, including: (i) outstanding warrants to purchase 1,500,000 shares of the Organovo's common stock issued to investors participating in the Company's bridge financing completed in November 2011 (the "Bridge Warrants"); (ii) outstanding warrants to purchase 11,653,678 shares of Organovo's common stock issued to investors participating in Organovo's private placement financings closed on February 8, 2012, February 29, 2012 and March 16, 2012 (the "Investor Warrants"); and (iii) outstanding warrants to purchase 1,357,250 shares of Organovo's common stock issued to investors in Organovo's private placement transactions completed in 2011 (the "Private Warrants" and collectively with the Bridge and Investor Warrants, the "Original Warrants"), pursuant to which the Original Warrants will be amended (the "Offer to Amend and Exercise"). All terms used herein shall have the same meaning as the Offer to Amend and Exercise, as amended to date.

The Offer to Amend and Exercise which was previously scheduled to expire today, Monday, December 17th at 5:00 p.m. Pacific Time — will now remain open until **Friday, December 21st at 5:00 p.m. Pacific Time**.

In order to participate in the Offer to Amend and Exercise, your acceptance and exercise documents must be submitted and received by us by this new deadline. Any withdrawals of previous elections must also be submitted and received by us by this time. If you have already submitted your election form, unless you wish to withdraw, no further action is necessary.

We are also shortening the lock-up period that will contractually restrict the ability of holders of shares issuable upon exercise of the Amended Warrants to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any of such shares. Previously, we were requiring a twenty (20) day lock-up period after the expiration date of the Offer to Amend and Exercise. The lock-up period will now expire at 5:00 p.m. Pacific Time on January 3, 2013.

In addition, we are also making a minor clarification with respect to the applicable withdrawal procedures should you desire to withdraw your Original Warrants from the Offer to Amend and Exercise. Previously, we had informed you that you may change your mind and submit a Notice of Withdrawal after January 16, 2013, if your acceptance and exercise documents had not been accepted prior to January 16, 2013. The references to January 16, 2013 in the Offer to Amend and Exercise documents were erroneous and have been changed in each instance to January 15, 2013.

As of 1:00 p.m. Pacific Time on Monday, December 17, 2012, the following Original Warrants had been amended and exercised by their Holders pursuant to the Offer to Amend and Exercise: 464,000 Bridge Warrants; 7,067,427 Investor Warrants; and 365,750 Private Warrants.

The Offer to Amend and Exercise is subject to the terms and conditions described in the offering materials, and we urge you to read the Offer to Amend and Exercise and the other documents governing the Offer to Amend and Exercise. If you have any question or need assistance, you should contact Aegis Capital Corp., the Warrant Agent at:

810 7th Avenue, 18th Floor  
New York, NY 10019  
Attention: Adam K. Stern  
Head of Private Equity Banking  
(646) 502-2401

If you need additional copies of any of the offering materials please contact the Company at:

6275 Nancy Ridge Drive  
San Diego, California 92121  
Attention: Corporate Secretary  
(858) 550-9994

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As always, thank you for your continued commitment and support.

Very truly Yours,  
/s/ Keith Murphy  
Organovo Holdings, Inc.  
Keith Murphy  
Chief Executive Officer and President

Dear Organovo Warrantholders,

I'm writing to update you briefly about Organovo's current warrant tender offer to amend and exercise certain warrants, as described in our Tender Offer Statement filed with the Securities and Exchange Commission. The offer has been proceeding very well, and I'd like to say thank you to all who have elected to accept the offer and have already exercised your warrants. If you have not yet chosen to do so, but remain interested, please do turn your attention to it and complete the documents and remit at your earliest convenience. In order to accommodate the needs of certain investors who have communicated plans to accept the offer, but require more time to process documents, we are extending the expiration date of the offer to **December 21, 2012, at 5:00 p.m. Pacific Time**. This will be the final date for accepting the offer and we have no plans to extend the expiration date further.

We have attached a letter to this email discussing the extension of the offer expiration date in further detail. In addition, this letter explains our decision to shorten the lock-up period to January 3, 2013 for shares issued upon exercise of your warrants and clarifies your withdrawal rights.

As previously disclosed, we believe Organovo has shown strong progress throughout 2012, and we look forward to 2013. We've grown our executive management team, and started to deliver results on tissues like our 3D bioprinted liver. Look for us to be releasing data on the 3D bioprinted liver starting Q2 next year at scientific conferences. With 2012 drawing to a close, the new Organovo team is more excited than ever about pursuing the promise of bioprinting technology.

Thank you for your continued support.

Best regards,  
Keith Murphy

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Keith Murphy  
*Chief Executive Officer*

Organovo, Inc.  
6275 Nancy Ridge Dr.  
San Diego, CA 92121

(858) 550-9993  
[kmurphy@organovo.com](mailto:kmurphy@organovo.com)

#### **Important Information**

The information in this correspondence is for informational purposes only, and the foregoing reference to the tender offer shall not constitute an offer to buy, exchange or amend securities or constitute the solicitation of an offer to sell, exchange or amend any of the Company's securities. The Company filed a tender offer statement on Schedule TO and the offering materials related to the tender offer, including the Offer to Amend and Exercise, the Election to Participate and Exercise Warrant, forms of Amended Warrants and Notice of Withdrawal, with the SEC. These documents, as amended through the date of this correspondence, contain important information that should be read carefully and considered before any decision is made with respect to the tender offer. These documents may be obtained free of charge at the SEC's website at [www.sec.gov](http://www.sec.gov). In addition, these documents (and all other materials filed by the Company with the SEC) may be obtained at no charge by directing a request to Organovo Holdings,



Inc., 6275 Nancy Ridge Drive, San Diego, California 92121, Attn: Corporate Secretary, telephone number (858) 550-9994.

Organovo Holdings has retained Aegis Capital Corp. as its Warrant Agent for the tender offer. Aegis Capital may be reached at 810 7th Avenue, 18th Floor, New York, NY 10019, Attn: Adam K. Stern, Head of Private Equity Banking, telephone (646) 502-2401.

### **Forward Looking Statements**

All statements in this correspondence that are not statements of historical fact are forward-looking statements. These statements, include, but are not limited to, statements regarding the potential benefits and future uses of the Company's science and technology, the Company's plan to release scientific data on its 3D liver product and the Company's future business plans and opportunities. Any forward-looking statements contained herein are based on current expectations, but are subject to a number of risks and uncertainties. The various risks and uncertainties that could cause the Company's actual future results to differ materially from current expectations include, but are not limited to, those risks and uncertainties relating to the Company's ability to develop, market and sell products based on its science and technology; the expected benefits and efficacy of the Company's products and technology; the availability of substantial additional funding for the Company to continue its operations and to conduct research and development, clinical studies and future product commercialization; and the Company's failure to achieve its business, research, product development, regulatory approval, marketing and distribution plans and strategies. These and other factors are identified and described in more detail in the Company's filings with the SEC, including its Tender Offer Statement on Schedule TO, filed with the SEC on November 16, 2012, as amended on November 23, December 5 and December 17, 2012. These forward-looking statements are made as of the date of this correspondence, and the Company does not undertake an obligation to update these forward-looking statements after such date.