

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 8-K**

**CURRENT REPORT**

**Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): April 4, 2013

**ORGANOVO HOLDINGS, INC.**

(Exact name of registrant as specified in its charter)

**Commission File Number: 000-54621**

**Delaware**  
(State or other jurisdiction  
of incorporation)

**27-1488943**  
(I.R.S. Employer  
Identification No.)

**6275 Nancy Ridge Dr.,  
San Diego, California 92121**  
(Address of principal executive offices, including zip code)

**(858) 550-9994**  
(Registrant's telephone number, including area code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

## Item 7.01 Regulation FD Disclosure

On April 4, 2013, the Company will be providing a live webcast presentation to investors via RetailInvestorConferences.com. The presentation will take place at 12:00PM EDT and investors may access the presentation at [www.retailinvestorconferences.com](http://www.retailinvestorconferences.com) > click on red “register / watch event now” button. A copy of the presentation slides (the “Investor Presentation”) is furnished as Exhibit 99.1 to this Current Report and is incorporated herein by reference.

## Forward Looking Statements

Any statements contained in the Investor Presentation that do not describe historical facts may constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. Any forward-looking statements are based on our current expectations, but are subject to a number of risks and uncertainties. The factors that could cause our actual future results to differ materially from our current expectations include, but are not limited to, risks and uncertainties relating to the Company’s ability to develop, market and sell products based on its technology; the expected benefits and efficacy of the Company’s products and technology; the availability of substantial additional funding to support the Company’s operations; the Company’s ability to enter into successful collaboration arrangements; and the Company’s ability 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 our filings with the SEC, including our annual report on Form 10-K filed with the SEC on March 15, 2013. You should not place undue reliance on forward-looking statements, which speak only as of the date of the Investor Presentation. Except as required by applicable law, we do not intend to update any of the forward-looking statements to conform these statements to reflect actual results, later events or circumstances or to reflect the occurrence of unanticipated events.

The information furnished on this Form 8-K, including Exhibit 99.1, shall not be deemed “filed” for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference into any other filing under the Securities Act or the Exchange Act, except as expressly set forth by specific reference in such a filing.

## Item 9.01 Exhibits

(d) Exhibits

The following exhibit is filed as part of this report:

| <u>Exhibit No.</u> | <u>Description</u>                          |
|--------------------|---|
| 99.1               | Investor Presentation, dated April 4, 2013. |

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned hereunto duly authorized.

**ORGANOVO HOLDINGS, INC.**

Date: April 4, 2013

/s/ Barry Michaels  
Barry Michaels  
Chief Financial Officer

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**Exhibits**

| <u>Exhibit No.</u> | <u>Description</u>                          |
|--------------------|---|
| 99.1               | Investor Presentation, dated April 4, 2013. |



# Changing the Shape of Medical Research and Practice

Keith Murphy

*Chairman and Chief Executive Officer*

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# SAFE HARBOR STATEMENT

Any statements contained in this presentation that do not describe historical facts may constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. Any forward-looking statements are based on our current expectations, but are subject to a number of risks and uncertainties. The factors that could cause our actual future results to differ materially from our current expectations include, but are not limited to, risks and uncertainties relating to the Company's ability to develop, market and sell products based on its technology; the expected benefits and efficacy of the Company's products and technology; the availability of substantial additional funding to support the Company's operations; the Company's ability to enter into successful collaboration arrangements; and the Company's ability 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 our filings with the SEC, including our annual report on Form 10-K filed with the SEC on March 15, 2013. You should not place undue reliance on forward-looking statements, which speak only as of the date of this presentation. Except as required by applicable law, we do not intend to update any of the forward-looking statements to conform these statements to reflect actual results, later events or circumstances or to reflect the occurrence of unanticipated events.



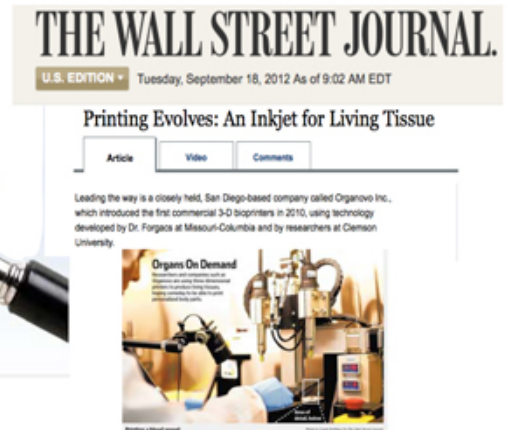
OTC QX: ONVO

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research and practice



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- Organovo holds rights to proprietary bioprinting technology developed at the University of Missouri with a \$5M National Science Foundation grant
- Based in San Diego in a 15,000 sq ft facility with dedicated bioprinting / tissue culture and analytical laboratories
- A leader in “3D printing” of human tissue targeting *in vitro* and *in vivo* applications



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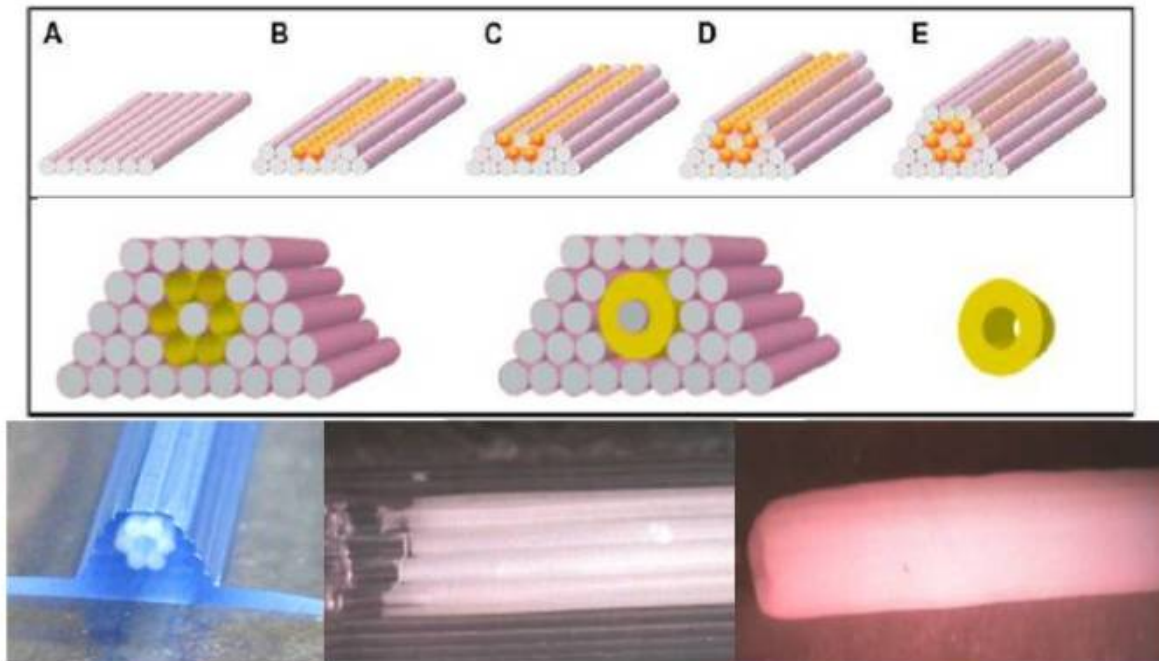
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# Organovo's pioneering technology creates functional human tissues without scaffolds

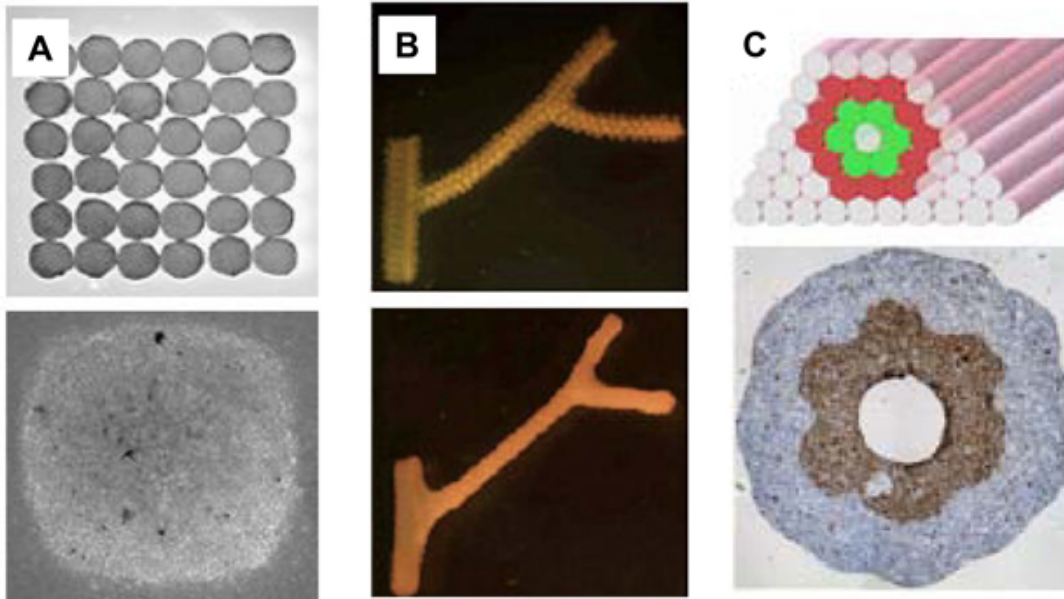


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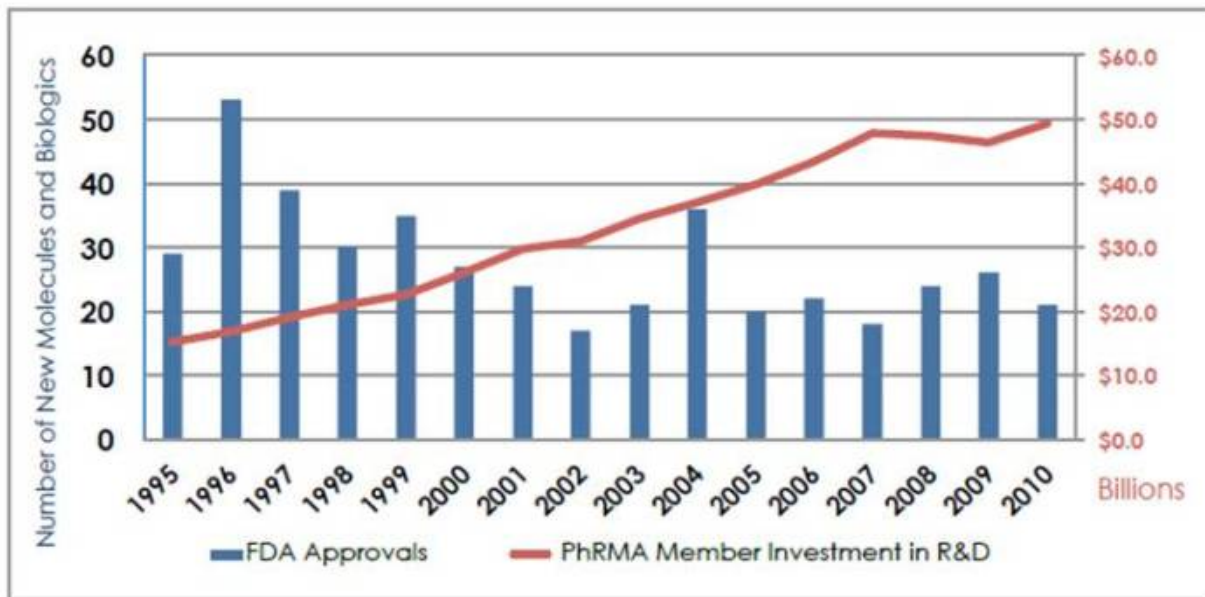
# Tissue sheets, branched tubes, and layered tubes have been bioprinted



(A) Bio-ink composed of chick cardiac cell aggregates; (B) Bio-ink composed of CHO cells; (C) A bi-layered tube composed of fibroblasts and smooth muscle cells (brown = smooth muscle actin). Adapted from *Biofabrication* 2:1, 2010, coauthored by K. Murphy and G. Forgacs, ONVO's CEO and Scientific Founder.

# Drug discovery: There is an imperative for pharmacos to kill drugs *faster* and *cheaper*

## FDA Approval Rate vs. Rising Cost of R&D



Source: Data on FDA approvals obtained from FDA.gov 2011; Data on Pharma Investment from the Pharmaceutical Research Manufacturers of America, Profile 2011

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# Market research reveals opportunity

## ▪ Cell Assay Products

- Identified specific market opportunity >\$500M by 2018<sup>†</sup>
- High unmet customer need and market opportunity identified that can be met with 3D cell assay products<sup>†</sup>
- Overall cell biology market growing to \$17B by 2016, 12% CAGR<sup>†</sup>

ScientiaAdvisors

<sup>†</sup> Source: 2012 Scientia Advisors market research, sponsored by company

## ▪ Disease models

- Qualitative market research conducted to target initial opportunities – including Oncology
- Focus on Pharma co. “lead optimization” as entry point

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We have partnered with corporate and academic partners to develop 3D tissues



HARVARD  
MEDICAL SCHOOL



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# Academic Partnership in Drug Discovery



**KNIGHT  
CANCER INSTITUTE**  
*Oregon Health & Science University*

## ▪ OHSU Partnership

- Cancer research top investigators (Gleevec, FISH)
- Allows Organovo to move upstream in discovery efforts

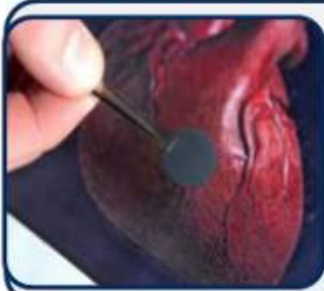
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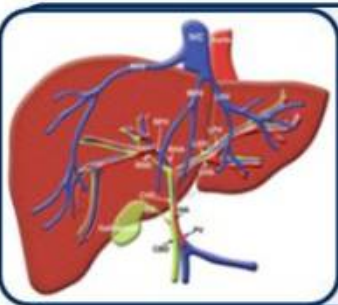
# Organovo's opportunities reach beyond pharma

## Bioprinted surgical tissues



### TREAT TISSUES

Heart muscles    Renal patches



### TRANSPLANT TISSUES

Livers    Lungs    Kidneys

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# Organovo has made tremendous progress

## ▪ Recent Milestones

- Successfully hit targets in Pfizer collaboration
- Expanded contract with United Therapeutics
- Autodesk & ZenBio partnerships
- Opened 15,000 sq. ft. new facility
- Completed initial market research
- OTC QX uplist



## Recent positives

### ▪ **Autodesk Partnership**

- Develop 3D Bioprinting design software
- Organovo will be engaging with technology partners that complement our core capabilities in 3D functional human tissues

### ▪ **Raised funds**

- End 2012 Cash on hand \$14.8M
- Warrant call ending March 14 raised additional \$2.3M

## Organovo will keep delivering: 2013 Milestones

- Major new data on 3D liver this month
  - Functional validation of 3D liver by Dec 2013
  - Initiate alpha testing with KOLs by Apr 2014
  - Liver assay launch by Dec 2014
- 3D Bone assay in development
- Additional technology partnerships to develop bioprinting
- Change in fiscal year to year end Mar 31
- Continue make progress and stay on track for application for NYSE or NASDAQ uplisting by mid-year

# Organovo's bioprinting technology

- **Accelerates breakthrough research**
  - Better recreation of “human biology in a petri dish”
  - Better than animal models
  - Better than cells alone
- **Has broad applications for unmet needs**
  - Pharma Drug Discovery (Now)
  - Toxicology Testing (Now)
  - Transplant tissues (Next)

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# LEADERSHIP



## **KEITH MURPHY, CEO & President**

- 19 years of experience in biotechnology
- Amgen, 10 years, Global Operations Leader, Prolia/Xgeva
- Alkermes, drug delivery technology background
- UCLA, School of Business
- MIT, Chemical Engineering



## **BARRY MICHAELS, CFO & Secretary**

- 30 years of financial and general management experience in medical device and biotechnology
- CFO of three private and three publicly traded companies
- Finalist, San Diego CFO of the Year for 2012

# LEADERSHIP



**SHARON PRESNELL, PhD**  
**CHIEF TECHNOLOGY OFFICER & EVP, R&D**

- 15 years of leadership experience in product-focused R&D
- SVP of R&D Tengion, Inc.
- 6 years R&D at Becton Dickinson
- Asst. Professor, U. of North Carolina, Chapel Hill



**ERIC MICHAEL DAVID, M.D., J.D.**  
**CHIEF STRATEGY OFFICER**

- Associate Partner, McKinsey & Company
- Life Science Pipeline and R&D Strategy Consulting
- Assistant Professor, Rogosin Institute
- Adjunct Faculty, Rockefeller University

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# LEADERSHIP



## **MIKE RENARD, EXEC VP COMMERCIAL**

- Proven revenue generating product wins in research and diagnostics instrumentation and consumables
- 25+ years in life sciences
- Experience building and launching products at Beckman Coulter and Sanofi

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# SCIENTIFIC ADVISORY BOARD

## **DAVID MOONEY, PhD – Harvard**

- Professor of Bioengineering, Harvard University
- Faculty, Wyss Institute for Biologically Inspired Engineering

## **GORDANA VUNJAK-NOVAKOVIC, PhD – Columbia**

- Professor of Biomedical Engineering, Columbia University
- Co-wrote the text on cell culture in tissue engineering

## **GLENN PRESTWICH, PhD – U. of Utah**

- Professor of Chemistry (Biomaterials)
- Accomplished entrepreneur (Four biomedical companies launched)

## **CRAIG KENT, MD – Chief of Surgery, U. of Wisconsin**

- Former Chairman, Society for Vascular Surgery
- Extremely well published in vascular biology



OTC QX: ONVO

## Organovo Contacts:

### Investor Relations

Booke and Company

[admin@bookeandco.com](mailto:admin@bookeandco.com)

(646) 571-2439

### Website

<http://www.organovo.com>

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