

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

**Amendment No. 1  
to  
FORM S-1  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**ORGANOVO HOLDINGS, INC.**

(Exact name of registrant as specified in its charter)

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

**2836**  
(Primary Standard Industrial  
Classification Code Number)

**27-1488943**  
(I.R.S. Employer  
Identification Number)

**5871 Oberlin Drive, Suite 150,  
San Diego, California 92121  
Phone: (858) 550-9994**  
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Keith Murphy**  
**Chairman, Chief Executive Officer and President**  
**5871 Oberlin Drive, Suite 150,  
San Diego, California 92121  
Phone: (858) 550-9994**  
(Name, address, including zip code, and telephone number, including area code of agent for service)

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**Approximate date of commencement of proposed sale to public:** As soon as practicable after the effectiveness of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer   
Non-accelerated filer  Smaller reporting company

**Calculation of Registration Fee**

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.001 par value per share (2)	15,247,987	\$5.24(3)	\$79,899,452(3)	\$9,157(3)
Common Stock, \$0.001 par value per share (4)	15,247,987	\$1.00(6)	\$15,247,987(6)	\$1,748 (6)
Common Stock, \$0.001 par value per share (5)	1,500,000	\$1.00(6)	\$1,500,000(6)	\$172 (6)
Common Stock, \$0.001 par value per share (7)	100,000	\$3.37(7)	\$337,000	\$39(7)

Total	32,095,974	N/A	\$96,984,439	\$11,116(8)
(1)	In the event of a stock split, stock dividend or similar transaction involving our common stock, the number of shares registered shall automatically be increased to cover the additional shares of common stock issuable pursuant to Rule 416 under the Securities Act of 1933, as amended.			
(2)	Represents shares of common stock issued to the selling security holders in the registrant's private placement (the "Offering") of units consisting of (i) one share of the registrant's common stock and (ii) one warrant to purchase one share of the registrant's common stock at an exercise price of \$1.00 per share (the "Units"). Closings of the Offering occurred on each of February 8, 2012 (the "Initial Closing"), February 29, 2012 and March 16, 2012. Also represents shares of common stock issued to certain of the selling security holders on the date of the Initial Closing of the Offering in connection with the conversion of the registrant's \$1,500,000 in principal amount of 6% convertible promissory notes due March 31, 2012 (the "Bridge Notes") into 1,525,387 Units.			
(3)	Fee calculated in accordance with Rule 457(c) of the Securities Act based on the average of the high and low price for our common stock on the OTCQB as of June 11, 2012.			
(4)	Represents shares of common stock issuable upon the exercise of warrants issued to the selling security holders in the Offering of Units and shares of common stock issuable upon the exercise of warrants issued to certain of the selling security holders on the date of the Initial Closing of the Offering in connection with the conversion of the Bridge Notes into 1,525,387 Units.			
(5)	Represents shares of common stock issuable upon the exercise of warrants issued to certain selling security holders in connection with the original issuance of the registrant's Bridge Notes that were converted into 1,500,000 new warrants on the date of the Initial Closing, each exercisable at a price of \$1.00 per share of the registrant's common stock.			
(6)	Fee calculated in accordance with Rule 457(g), based upon the highest exercise price of the warrants held by the selling security holders at the time of registration.			
(7)	Represents 100,000 shares of common stock issued to a consultant of registrant. Fee calculated in accordance with Rule 457(c) of the Securities Act based on the average of the high and low price for our common stock on the OTCQB as of July 3, 2012.			
(8)	Previously paid \$11,077.			

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**THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.**

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The information in this prospectus is not complete and may be changed. The selling security holders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JULY 5, 2012

PRELIMINARY PROSPECTUS

# ORGANOVO HOLDINGS, INC.

15,347,987 shares of Common Stock

16,747,987 shares of Common Stock issuable upon the exercise of Warrants

This prospectus relates to the resale by certain selling security holders of Organovo Holdings, Inc. of up to 32,095,974 shares of our common stock in connection with the resale of:

- up to 15,347,987 shares of our common stock which were issued in our private placement (the “Offering”) of units consisting of (i) one share of our common stock and (ii) one warrant to purchase one share of our common stock at an exercise price of \$1.00 per share (the “Units”), with closings of the Offering occurring on each of February 8, 2012 (the “Initial Closing”), February 29, 2012 and March 16, 2012, shares of common stock issued to certain of the selling security holders on the date of the Initial Closing of the Offering in connection with the conversion of our \$1,500,000 in principal amount of 6% convertible promissory notes due March 31, 2012 (the “Bridge Notes”) into 1,525,387 Units and 100,000 shares of common stock issued to a consultant;
- up to 15,247,987 shares of our common stock issuable upon the exercise of warrants issued to the selling security holders in our Offering of Units (excluding warrants issued to our placement agents in the Offering) and shares of common stock issuable upon the exercise of warrants issued to certain of the selling security holders on the date of the Initial Closing of the Offering in connection with the conversion of the Bridge Notes into 1,525,387 Units; and
- up to 1,500,000 shares of our common stock issuable upon the exercise of warrants issued to certain selling security holders in connection with the original issuance of our Bridge Notes that were converted into 1,500,000 new warrants on the date of the Initial Closing, each exercisable at a price of \$1.00 per share of our common stock.

The selling security holders may offer to sell the shares of common stock being offered in this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices, or at negotiated prices. We do not know when or in what amount the selling security holders may offer the securities for sale. The selling security holders may sell any, all or none of the securities offered by this prospectus.

We will not receive proceeds from the sale of shares by the selling security holders. Any proceeds received by us from the exercise of warrants by the selling security holders will be used for general corporate purposes. The selling security holders and any brokers executing sell orders on behalf of the selling security holders may be deemed to be “underwriters” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”). Commissions received by a broker executing sell orders may be deemed to be underwriting commissions under the Securities Act.

Our common stock is traded on the OTCQB under the symbol “ONVO.” On July 3, 2012, the closing sale price of our common stock on the OTCQB was \$3.60 per share.

**Investing in our securities involves significant risks. See “[Risk Factors](#)” beginning on page 6.**

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

The date of the prospectus is \_\_\_\_\_, 2012.

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**ORGANOVO HOLDINGS, INC. HAS NOT REGISTERED THE SHARES OF COMMON STOCK THAT MAY BE SOLD BY THE SELLING SECURITY HOLDERS UNDER THE SECURITIES LAWS OF ANY STATE. SELLING SECURITY HOLDERS, AND ANY BROKERS OR DEALERS, EFFECTING TRANSACTIONS IN THE SHARES SHOULD CONFIRM THAT THE SHARES HAVE BEEN REGISTERED UNDER THE SECURITIES LAWS OF THE STATE OR STATES IN WHICH SALES OF THE SHARES OCCUR AS OF THE TIME OF SUCH SALES, OR THAT THERE IS AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES LAWS OF SUCH STATES.**

**THIS PROSPECTUS IS NOT AN OFFER TO SELL ANY SECURITIES OTHER THAN THE SHARES OF COMMON STOCK FOR SALE BY THE SELLING SECURITY HOLDERS. THIS PROSPECTUS IS NOT AN OFFER TO SELL SECURITIES IN ANY CIRCUMSTANCES IN WHICH SUCH AN OFFER IS UNLAWFUL.**

You should rely only on the information contained in this prospectus. Neither we nor the selling security holders have authorized anyone to provide you with information that is different from that contained in this prospectus. We and the selling security holders take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We. If anyone provides you with different information, you should not rely on it. Neither we nor the selling security holders are making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information contained in this prospectus is accurate only as of the date on the front cover of this prospectus. Neither the delivery of this prospectus nor any sale made in connection with this prospectus shall, under any circumstances, create any implication that there has been no change in our affairs since the date of this prospectus or that the information contained by reference to this prospectus is correct as of any time after its date.

In this prospectus, "Organovo," "the Company," "we," "us," and "our" refer to Organovo Holdings, Inc., a Delaware corporation, unless the context otherwise requires.

## **FORWARD-LOOKING STATEMENTS**

This prospectus contains forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements relate to anticipated future events, future results of operations or future financial performance. These forward-looking statements include, but are not limited to, statements relating to our ability to raise sufficient capital to finance our planned operations, market acceptance of our technology and product offerings, our ability to attract and retain key personnel, our ability to protect our intellectual property, and estimates of our cash expenditures for the next 12 to 36 months. In some cases, you can identify forward-looking statements by terminology such as “may,” “might,” “will,” “should,” “intends,” “expects,” “plans,” “goals,” “projects,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” or “continue” or the negative of these terms or other comparable terminology.

These forward-looking statements are only predictions, are uncertain and involve substantial known and unknown risks, uncertainties and other factors which may cause our (or our industry’s) actual results, levels of activity or performance to be materially different from any future results, levels of activity or performance expressed or implied by these forward-looking statements. The “Risk Factors” section of this prospectus sets forth detailed risks, uncertainties and cautionary statements regarding our business and these forward-looking statements.

We cannot guarantee future results, levels of activity or performance. You should not place undue reliance on these forward-looking statements, which speak only as of the date that they were made. These cautionary statements should be considered with any written or oral forward-looking statements that we may issue in the future. Except as required by applicable law, including the securities laws of the United States, 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.

## PROSPECTUS SUMMARY

The following summary highlights selected information contained in this prospectus. Because it is a summary, it does not contain all of the information you should consider before making an investment decision. Before making an investment decision, you should read the entire prospectus carefully, including the “Risk Factors” section, the financial statements, and the notes to the financial statements.

### Overview

We have developed and are commercializing a platform technology for the generation of three-dimensional (3D) human tissues that can be employed in drug discovery and development, biological research, and as therapeutic implants for the treatment of damaged or degenerating tissues and organs. We intend to introduce a paradigm shift in the approach to the generation of three-dimensional human tissues, by creation of constructs in 3D that have the potential to replicate native human biology. We can improve on previous technologies by moving away from monolayer 2D cell cultures and by enabling all or part of the tissues we create to be constructed solely of cells. We believe our expertise in printing small-diameter, fully cellular human blood vessels *in vitro* provides a strong foundation upon which other tissues can be built to replicate human biology and human disease. We believe that our broad and exclusive commercial rights to patented and patent-pending 3D bioprinting technology, combined with strengths in engineering and biology, put us in an ideal position to provide a wide array of products for use in research, drug discovery and regenerative medicine therapies.

Our foundational proprietary technology derives from research led by Dr. Gabor Forgacs, a Professor of Biophysics at the University of Missouri. We have a broad portfolio of intellectual property rights covering 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, and outright ownership of six pending patent applications (the patents and patent rights described in this paragraph are sometimes collectively referred to as the “Intellectual Property Rights”). See “Description of Business—Intellectual Property”. We believe that our portfolio of Intellectual Property Rights provides a strong and defensible market position for the commercialization of 3D bioprinting technology.

We believe we have the potential to build and maintain a sustainable business by leveraging our core technology platform across a variety of applications. As part of our business strategy we intend to pursue collaboration agreements with drug development companies that will allow us to further develop our 3D bioprinting technology and the potential uses of the cellular structures and tissues that can be produced with our technology. We also plan to develop research products with our 3D bioprinting technology that can be offered to third parties involved in drug discovery. We currently have collaborative research agreements currently in effect with Pfizer, Inc. (“Pfizer”) and United Therapeutic Corporation (“Unither”). As of March 31, 2012, we have also secured five federal grants in the aggregate amount of approximately \$955,000 including Small Business Innovation Research grants and developed the NovoGen MMX Bioprinter™ (our first-generation 3D bioprinter) – within two and one half years of opening our first facilities. We believe these corporate achievements provide strong validation for the commercial viability of our technology.

As of March 31, 2012, we had devoted substantially all of our efforts to product development, raising capital and building infrastructure. We did not, as of that date, realize significant revenues from our planned principal operations. Accordingly, we are considered to be in the development stage.

### The Technology

Our technology is centered around a core 3D bioprinting method, represented by our bioprinting instrument, the NovoGen MMX Bioprinter™. The 3D bioprinting technology enables a wide array of tissue compositions and architectures to be created, using combinations of cellular ‘bio-ink’ (building blocks comprised solely of cells), hydrogel (building blocks comprised of biocompatible gels), or hybrid ‘bio-ink’ (building blocks comprised of a mixture of cells and material such as hydrogel). A key distinguishing feature of our bioprinting platform is the ability to generate three-dimensional constructs that have all or some of their components comprised entirely of cells. The fully-cellular feature of our technology enables architecturally- and compositionally-defined 3D human tissues to be generated for *in vitro* use in drug discovery and development to potentially replicate the functional biology of a solid, fully cellular tissue. Furthermore, fully cellular constructs may offer specific advantages for regenerative medicine applications where bioactive cells are required and three-dimensional configuration is necessary, such as augmenting or replacing functional mass in tissues and organs that have sustained acute or chronic damage.

We plan to develop research products with our 3D bioprinting technology that can be offered to third parties involved in drug discovery. We intend to deliver the following products to the market:

- Three-dimensional models of human tissue for utilization in traditional absorption, distribution, metabolism, excretion (ADME) / toxicology (TOX) / and drug metabolism and pharmacokinetics (DMPK) testing in drug development.
- Specific models of human biology or pathophysiology, in the form of three-dimensional human tissues, and for use in drug discovery, development, and delivery.
- Three-dimensional human tissues for use as therapeutic regenerative medicine products, such as blood vessels for bypass grafting, nerve grafts for nerve damage repair and cardiac patches for treatment of heart disease.
- 3D bioprinters for use in medical research.
- A portfolio of consumables for use in 3D bioprinting.

As part of our business strategy we intend to pursue collaboration agreements with drug development companies that will allow us to further develop our 3D bioprinting technology and the potential uses of the cellular structures and tissues that can be produced with our technology. We currently have a collaborative research agreement with Pfizer to develop specific three-dimensional tissue models. We are engaged in the development of specific 3D human tissues to aid Pfizer in discovery of successful therapies in two areas of interest. In addition, in October 2011, we entered into a research agreement with Unither to establish and conduct a research program to discover treatments for pulmonary hypertension using our NovoGen MMX Bioprinter™ technology.

### Market Opportunity

We believe that our bioprinting technology is uniquely positioned to provide three-dimensional human tissues for use in drug discovery and development as well as a broad array of tissues suitable for therapeutic use in regenerative medicine applications. While there are rapid-prototyping printers currently available that build three-dimensional structures out of polymers (often used for prototyping of plastic parts for tools or devices), these instruments are not specifically designed or intended for use with purely cellular inks in building biologic tissues and we do not believe that the firms working on these instruments have the required biology expertise to create tissues using these instruments at this time. There are multiple markets addressable by our technology platform:

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- 1) **Specialized Models for Drug Discovery and Development:** Our NovoGen MMX Bioprinter™ can produce highly specialized three-dimensional human tissues that can be utilized to model a specific tissue physiology or pathophysiology. Our bioprinting technology has demonstrated the ability to create human blood vessel constructs, and to create fully human tissue containing capillary structures. These capabilities are anticipated to broaden the scope and scale of 3D tissues that can be generated, and to facilitate the development of disease models in such areas as cardiovascular disease, oncology, and fibrosis.
- 2) **Biological Research Tools:** Absorption, distribution, metabolism, excretion (ADME) testing is used to determine which factors enhance or inhibit how a potential drug compound reaches the blood stream. Distribution of a compound can be affected by binding to plasma proteins; age, genetics, and other factors can influence metabolism of a compound; and the presence of certain disease states can have effects on excretion of a compound. Many companies perform ADME studies utilizing various cell-based assays or automated bioanalytical techniques. Drug metabolism and pharmacokinetics (DMPK) testing is a subset of ADME. Determining the DMPK properties of a drug helps the drug developer to understand its safety and efficacy. Toxicology (TOX) testing is a further requirement to determine the detrimental effects of a particular drug on specific tissues. We believe that the NovoGen MMX Bioprinter™ is positioned to deliver highly differentiated products for use in traditional cell-based ADME / TOX / DMPK studies. Products in this arena may replace or complement traditional cell-based assays that typically employ primary hepatocytes, intestinal cell lines, renal epithelial cells and cell lines grown in a traditional two-dimensional format. Importantly, the combination of tissue-like three-dimensionality and human cellular components is believed to provide an advantage over non-human animal systems toward predicting *in vivo* human outcomes.
- 3) **Regenerative Medicine:** The field of regenerative medicine is advancing via multiple strategic approaches in development and practice, including cell therapies and scaffold-based products (+/- cells). The architectural precision and flexibility of our technology may facilitate the optimization, development, and clinical use of three-dimensional tissue constructs. Importantly, our technology offers a next-generation strategy whereby three-dimensional structures can be generated without the use of scaffolding or biomaterial components. The ultimate goal is to enable fully cellular constructs to be generated in a configuration compatible with surgical modes of delivery, thereby enabling restoration of significant functional mass to a damaged tissue or organ.

We believe that our technology can capitalize, via strategic partnerships, on additional market opportunities in the provision of enabling tools for drug discovery and development as well as the discovery and development of therapeutic implants that augment or replace damaged tissues and organs. There are multiple short- and long-term revenue opportunities for us in these areas, including direct sales of 3D human tissue constructs for drug screening and development, licensing fees for commercial access to our technology, and royalties from product enablement, particularly in the area of therapeutic products for regenerative medicine.

### **Corporate Background**

Real Estate Restoration and Rental, Inc. (“RERR”), our predecessor company, was incorporated in 2007 in the state of Nevada. On December 28, 2011, RERR entered into an Agreement and Plan of Merger pursuant to which RERR merged with its newly formed, wholly owned subsidiary, Organovo Holdings, Inc. (“Merger Sub”), a Nevada corporation (the “RERR Merger”). Upon the consummation of the RERR Merger, the separate existence of Merger Sub ceased and RERR, the surviving corporation in the RERR Merger, became known as Organovo Holdings, Inc. (“Holdings-Nevada”).

As permitted by Chapter 92A.180 of Nevada Revised Statutes, the sole purpose of the RERR Merger was to effect a change of RERR’s name. Upon the filing of Articles of Merger with the Secretary of State of Nevada on December 28, 2011 to effect the RERR Merger, RERR’s articles of incorporation were deemed amended to reflect the change in RERR’s corporate name.

On January 30, 2012, Holdings-Nevada entered into an Agreement and Plan of Merger pursuant to which Holdings-Nevada merged with and into its newly formed, wholly owned subsidiary, Organovo Holdings, Inc. (“Holdings-Delaware” or “Pubco”), a Delaware corporation (the “Reincorporation Merger”). Upon the consummation of the Reincorporation Merger, the separate existence of Holdings-Nevada ceased and Holdings-Delaware was the surviving corporation in the Reincorporation Merger. The sole purpose of the Reincorporation Merger was to change the domicile of Pubco from Nevada to Delaware.

On February 8, 2012, Organovo Acquisition Corp. (“Acquisition Corp.”), a wholly-owned subsidiary of Pubco, merged (the “Merger”) with and into Organovo, Inc., a Delaware corporation (“Organovo”). Organovo was the surviving corporation of that Merger. As a result of the Merger, Pubco acquired the business of Organovo, and will continue the existing business operations of Organovo.

### **Risks Associated with Our Business**

Investing in our common stock involves substantial risk. Before participating in this offering, you should carefully consider all of the information in this prospectus, including the risks discussed in “Risk Factors” immediately following this summary. In particular:

- We have a limited operating history and a history of operating losses, and expect to incur significant additional operating losses;
- We need to secure additional financing to support our planned operations;
- We are an early-stage company with an unproven business strategy and may never achieve commercialization of our research tools and therapeutic products or profitability;
- Our success and our collaborators’ ability to sell therapeutic products will depend to a large extent upon reimbursement from health care insurance companies;
- Our research tools are new and unproven and may not allow us or our collaborators to develop successful commercial products;
- Our proprietary tissue creation technology, drug discovery and research tools are subject to the risks associated with new and rapidly evolving technologies.
- The commercialization of therapeutic or other life science products developed using our research tools is subject to a variety of risks of failure inherent in their development or commercial viability, including the possibility that any such products will (i) fail to be found through the use of research tools; (ii) be found to be toxic or ineffective; (iii) fail to receive necessary regulatory approvals; (iv) be difficult or impossible to manufacture on a large scale; (v) be economically infeasible to market; (vi) fail to be developed prior to the successful marketing of similar products by competitors; or (vii) be impossible to market because they infringe the proprietary rights of third parties or compete with superior products marketed by third parties;
- If we are unable to enter into or maintain strategic collaborations with third parties, we may have difficulty selling our research tools and therapeutic products and we may not generate sufficient revenue to achieve or maintain profitability; and
- We cannot control our collaborators’ allocation of resources or the amount of time that our collaborators devote to developing our programs or

potential products, which may have a material adverse effect on our business.

- We will depend on our patent portfolio, our licensed technology and other trade secrets in the conduct of our business and must ensure that we do not violate the patent or intellectual property rights of others.



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**Corporate Information**

Our offices are located at 5871 Oberlin Drive, Suite 150, San Diego, California 92121. Our telephone number is (858) 550-9994. Our website can be found at [www.organovo.com](http://www.organovo.com). The information contained in or that can be accessed through our website is not part of this prospectus.

## The Offering

### Key Facts of the Offering

Common stock being offered by the selling security holders: 15,347,987

Total shares of common stock outstanding:<sup>(1)</sup> 43,693,241

Number of shares of common stock issuable upon the exercise of warrants held by the selling security holders registered on this prospectus: 16,747,987

Use of Proceeds: We will not receive any of the proceeds from the sale of our shares by the selling security holders. Any proceeds received by us from the exercise of warrants by the selling security holders will be used for general corporate purposes.

OTCQB Symbol: ONVO

Risk Factors: Investing in our securities involves a high degree of risk and purchasers of our securities may lose their entire investment. See "Risk Factors" below and the other information included elsewhere in this prospectus for a discussion of factors you should carefully consider before deciding to invest our securities.

(1) The number of shares of our common stock outstanding is based on the number of shares of our common stock outstanding as of March 31, 2012, including the shares of common stock held by the selling security holders. This number does not include:

- 24,256,932 shares of common stock issuable upon exercise of outstanding warrants at a weighted average exercise price of \$1.00 per share, including the warrants held by the selling security holders;
- 896,256 shares of common stock issuable upon exercise of outstanding options, at a weighted average exercise price of \$0.08 per share, which were issued under our 2008 Equity Incentive Plan prior to this offering;
- 6,553,986 shares of our common stock which remain available for grant and possible subsequent issuance under our 2012 Equity Incentive Plan; and
- 100,000 shares issued to a consultant.

Unless otherwise indicated, all information in this prospectus assumes that no options, warrants or shares of common stock were issued after March 31, 2012, and no outstanding options or warrants were exercised after March 31, 2012. In addition, unless otherwise indicated, all information in this prospectus assumes that the warrants issued in connection with this offering to the investors in the Units and our placement agents and financial advisor have not been exercised.

[Table of Contents](#)**Summary Financial Data**

The following summary audited financial information for the fiscal years ended December 31, 2011 and 2010, includes balance sheet and statement of operations data derived from our audited financial statements included elsewhere in this prospectus. The financial information as of March 31, 2012, and for the three months ended March 31, 2012 and 2011 is derived from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. The information contained in this table should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the financial statements and accompanying notes included in this prospectus. In the opinion of management, the unaudited interim financial statements have been prepared on the same basis as the audited financial statements and include all adjustments, consisting of only normal recurring adjustments, necessary for a fair presentation of our operating results and financial position for those periods and as of such dates. The results for any interim period are not necessarily indicative of the results that may be expected for a full year.

<b>Statement of Operations Data:</b>	<b>Organovo Holdings, Inc. For the Three Months Ended March 31, (unaudited)</b>		<b>Organovo Holdings, Inc. For the Year Ended December 31,</b>	
	<b>2012</b>	<b>2011</b>	<b>2011</b>	<b>2010</b>
Revenues	\$ 120,000	\$ 200,789	\$ 968,513	\$ 603,412
Research and Development Expense	547,287	398,664	1,419,718	1,203,716
General and Administrative Expense	901,843	243,494	1,705,171	577,914
Income (loss) from Operations	(1,329,130)	(491,953)	(2,289,983)	(1,178,218)
Change in fair value of warrants	(13,505,819)	—	6,569	—
Net Income (loss)	(37,080,582)	(546,585)	(4,383,262)	(1,338,694)
Income (loss) per Share	\$ (1.17)	\$ (0.04)	\$ (0.02)	\$ (0.09)

<b>Balance Sheet Data:</b>	<b>Organovo Holdings, Inc. For the Three Months Ended March 31, (unaudited)</b>		<b>Organovo Holdings, Inc. For the Year Ended December 31,</b>	
	<b>2012</b>	<b>2011</b>	<b>2011</b>	<b>2010</b>
Working Capital	\$ 9,723,755	\$ (945,543)	\$ (749,142)	\$ (749,142)
Total Assets	11,240,550	1,408,832	760,398	760,398
Current Liabilities	1,110,948	1,975,748	1,173,258	1,173,258
Total Stockholders’ Equity (Deficit)	\$ (37,385,108)	\$ (1,833,785)	\$ (2,300,360)	\$ (2,300,360)

## RISK FACTORS

*Any investment in our common stock involves a high degree of risk. You should consider carefully the following information about these risks, together with the other information contained in this prospectus, before you decide to buy our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our operations. If any of the following risks actually occur, our business would likely suffer and the trading price of our common stock could decline, and you may lose all or part of the money you paid to buy our common stock.*

### **Risks related to our Business and our Industry**

***We have a limited operating history and a history of operating losses, and expect to incur significant additional operating losses.***

We were incorporated in 2007, opened our laboratories in San Diego in January, 2009 and have only a limited operating history. Therefore, there is limited historical financial information upon which to base an evaluation of our performance. Our prospects must be considered in light of the uncertainties, risks, expenses, and difficulties frequently encountered by companies in their early stages of operations. We have generated operating losses since we began operations, including \$1,338,694, \$3,964,610 and \$1,329,130 for the year ended December 31, 2010 and 2011 and the three months ended March 31, 2012, respectively, and as of March 31, 2012, we had an accumulated operating loss of \$43,772,138. We expect to incur substantial additional operating expenses over the next several years as our research, development, and commercial activities increase. The amount of future losses and when, if ever, we will achieve profitability are uncertain. Our ability to generate revenue and achieve profitability will depend on, among other things, entering into customer relationships with strategic partners, successful completion of the preclinical and clinical development of our partners' product candidates; obtaining necessary regulatory approvals by our partners or us from the FDA and international regulatory agencies; successful manufacturing, sales, and marketing arrangements; and raising sufficient funds to finance our activities. We might not succeed at any of these undertakings. If we are unsuccessful at some or all of these undertakings, our business, prospects, and results of operations may be materially adversely affected.

***We will need to secure additional financing to support our planned operations.***

We will require additional funds for our anticipated operations and if we are not successful in securing additional financing, we may be required to delay significantly, reduce the scope of or eliminate one or more of our research or development programs, downsize our general and administrative infrastructure, or seek alternative measures to avoid insolvency, including arrangements with collaborative partners or others that may require us to relinquish rights to certain of our technologies, product candidates or products.

***We are an early-stage company with an unproven business strategy and may never achieve commercialization of our research tools and therapeutic products or profitability.***

Our strategy of using our research tools for the collaborative development of therapeutic products is unproven. Our success will depend upon our ability to enter into additional collaboration agreements on favorable terms, to determine which research tools and therapeutic products have potential value, and to select an appropriate commercialization strategy for each research tool and potential therapeutic product we or our collaborators choose to pursue. If we are not successful in implementing our strategy to commercialize our research tools and potential therapeutic products, we may never achieve, maintain or increase profitability.

***Our success and our collaborators' ability to sell therapeutic products will depend to a large extent upon reimbursement from health care insurance companies.***

Our success may depend, in part, on the extent to which reimbursement for the costs of therapeutic products and related treatments will be available from third-party payers such as government health administration authorities, private health insurers, managed care programs, and other organizations. Over the past decade, the cost of health care has risen significantly, and there have been numerous proposals by legislators, regulators, and third-party health care payers to curb these costs. Some of these proposals have involved limitations on the amount of reimbursement for certain products. Similar federal or state health care legislation may be adopted in the future and any products that we or our collaborators seek to commercialize may not be considered cost-effective. Adequate third-party insurance coverage may not be available for us or our collaborative partners to establish and maintain price levels that are sufficient for realization of an appropriate return on investment in product development.

***Our research tools are new and unproven and may not allow us or our collaborators to develop successful commercial products***

Our research tools involve new and unproven approaches. We have not proven that our research tools will enable us or our collaborators to identify therapeutic products with commercial potential, or to develop or commercialize such therapeutic products. Even if we or our collaborators are successful in identifying therapeutic products based on discoveries made using our research tools, we or our collaborators may not be able to discover or develop commercially viable products. To date, no one has developed or commercialized any therapeutic or other life science product based on our research tools. If our research tools do not assist in the discovery and development of such therapeutic products, our current and potential collaborators may lose confidence in us and our research tools and our business may suffer as a result.

If our collaborators, licensees and customers do not successfully develop or commercialize therapeutic or other life science products using our research tools, we may not generate revenues from those customers. In addition, we may experience unforeseen technical complications, unrecognized defects and limitations in the productions of our research tools. These complications could materially delay or limit the use of those tools, substantially increase the anticipated cost of manufacturing them or prevent us from implementing research projects at high efficiency levels.

***Our products and services are subject to the risks associated with new and rapidly evolving technologies.***

Our proprietary tissue creation technology, drug discovery and research tools are subject to the risks associated with new, rapidly evolving technologies. In addition, the process of developing new technologies and products is complex, and if we are unable to develop enhancements to, and new features for, our existing products or acceptable new products that keep pace with technological developments or industry standards, our products may become obsolete, less marketable and less competitive.

***The commercialization of therapeutic or other life science products developed using our research tools is subject to a variety of risks.***

Development of therapeutic and other life science products based on our or our collaborators' use of our technologies will be subject to risks of failure inherent in their development or commercial viability. These risks include the possibility that any such products will:

- fail to be found through the use of research tools;

- be found to be toxic;
- be found to be ineffective;
- fail to receive necessary regulatory approvals;

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- be difficult or impossible to manufacture on a large scale;
- be economically infeasible to market;
- fail to be developed prior to the successful marketing of similar products by competitors; or
- be impossible to market because they infringe the proprietary rights of third parties or compete with superior products marketed by third parties.

We expect that our drug discovery collaborative partners or other clients that utilize our research tools will be required to submit their research for regulatory review in order to proceed with human testing of drug candidates. This review by the FDA and other regulatory agencies may result in timeline setbacks or complete rejection of an application to begin human studies, such as an Investigative New Drug (IND) application. Should our collaborative partners or other clients face such setbacks, we would be at risk of not being paid if there were agreed upon milestone and royalty payments. The risks of non-approval for our partners or other clients will include the inherent risks of unfavorable regulator opinion of a drug candidate's safety or efficacy, as well as the risk that the data generated by our platform technology is not found to be suitable to support the safety or efficacy of the drug. In addition, our platform technology is subject to the requirements of Good Laboratory Practice (GLP) to provide suitable data for INDs and other regulatory filings; no regulatory review of data from this platform has yet been conducted and there is no guarantee that our technology will be acceptable under GLP.

***If we are unable to enter into or maintain strategic collaborations with third parties, we may have difficulty selling our research tools and therapeutic products and we may not generate sufficient revenue to achieve or maintain profitability.***

Since we do not currently possess the resources necessary to develop, obtain approvals for or commercialize potential therapeutic products based on our technology, we must enter into collaborative arrangements to develop and commercialize these products. If we are not able to enter into these arrangements or implement our strategy to develop and commercialize therapeutic and other life science products based upon our research tools, we may not generate sufficient revenues to achieve or maintain profitability. Additionally, we may not be able to negotiate future collaborative arrangements on acceptable terms, if at all.

***We cannot control our collaborators' allocation of resources or the amount of time that our collaborators devote to developing our programs or potential products, which may have a material adverse effect on our business.***

We have collaborative research agreements with Pfizer and Unither, and will seek to enter into additional collaborations. Our agreements with our collaborators typically allow them significant discretion in electing whether to pursue product development, regulatory approval, manufacturing and marketing of the products they may develop with the help of our technology. We cannot control the amount and timing of resources our collaborators may devote to our programs or potential products. As a result, we cannot be certain that our collaborators will choose to develop and commercialize these products or that we will realize any milestone payments, royalties and other payments to which we may become entitled. In addition, if a partner is involved in a business combination, such as a merger or acquisition, or if a partner changes its business focus, its performance pursuant to its agreement with us may suffer and, as a result, we may not generate any revenues from royalty, milestone and similar provisions that may be included in our collaborative agreement with that partner.

***Any termination or breach by or conflict with our collaborators or licensees could harm our business.***

If we or any of our collaborators or licensees fail to renew or terminate any of our collaboration or license agreements or if either party fails to satisfy its obligations under any of our collaboration or license agreements or complete them in a timely manner, we could lose significant sources of revenue, which could result in volatility in our future revenue.

In addition, our agreements with our collaborators and licensees may have provisions that give rise to disputes regarding the rights and obligations of the parties. These and other possible disagreements could lead to termination of the agreement or delays in collaborative research, development, supply or commercialization of certain products, or could require or result in litigation or arbitration. Moreover, disagreements could arise with our collaborators over rights to our intellectual property or our rights to share in any of the future revenues of products developed by our collaborators. These kinds of disagreements could result in costly and time-consuming litigation. Any such conflicts with our collaborators could reduce our ability to obtain future collaboration agreements and could have a negative impact on our relationship with existing collaborators, adversely affecting our business and revenues. Finally, any of our collaborations or license agreements may prove to be unsuccessful.

***Our collaborators could develop competing research, reducing the available pool of potential collaborators and increasing competition, which may adversely affect our business and revenues.***

Our collaborators and potential collaborators could develop research tools similar to our own, reducing our pool of possible collaborative parties and increasing competition. Any of these developments could harm our product and technology development efforts, which could seriously harm our business. In addition, we may pursue opportunities in fields that could conflict with those of our collaborators. Developing products that compete with our collaborators' or potential collaborators' products could preclude us from entering into future collaborations with our collaborators or potential collaborators. Any of these developments could harm our product development efforts and could adversely affect our business and revenues.

***If restrictions on reimbursements and health care reform limit our collaborators' actual or potential financial returns on therapeutic products that they develop based on our platform technology, our collaborators may reduce or terminate their collaborations with us.***

Our collaborators' abilities to commercialize therapeutic and other life science products that are developed through the research tools or services that we provide may depend in part on the extent to which coverage and adequate payments for these products will be available from government payors, such as Medicare and Medicaid, private health insurers, including managed care organizations, and other third-party payors. These payors are increasingly challenging the price of medical products and services. Significant uncertainty exists as to the reimbursement status of newly approved therapeutic and other life science products, and coverage and adequate payments may not be available for these products.

In recent years, officials have made numerous proposals to change the health care system in the U.S. These proposals included measures to limit or eliminate payments for some medical procedures and treatments or subject the pricing of pharmaceuticals and other medical products to government control. Government and other third-party payors increasingly attempt to contain health care costs by limiting both coverage and the level of payments of newly approved health care products. In some cases, they may also refuse to provide any coverage of uses of approved products for disease indications other than those for which the FDA has granted marketing approval. Governments may adopt future legislative proposals and federal, state or private payors for healthcare goods and services may take action to limit their payments for goods and services. Any of these events could limit our ability to form collaborations or collaborators' and our ability to commercialize therapeutic products successfully.

***We and our collaborators are subject to extensive and uncertain regulatory requirements, which could adversely affect our ability to obtain regulatory approval in a timely manner, or at all, for products that we identify or develop.***

Therapeutic and other life science products are subject to an extensive and uncertain regulatory approval process by the Food and Drug Administration (FDA) and comparable agencies in other countries. The regulation of new products is extensive, and the required process of laboratory testing and human studies is lengthy and expensive. The burden of these regulations will fall on our collaborating partners, or may be shared with us, to the extent that we are developing proprietary products that are the result of a collaboration effort. The burden of these regulations will fall on us to the extent we are developing proprietary products on our own.

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We may not be able to obtain FDA approvals for those products in a timely manner, or at all. We may encounter significant delays or excessive costs in our efforts to secure necessary approvals or licenses. Even if we obtain FDA regulatory approvals, the FDA extensively regulates manufacturing, labeling, distributing, marketing, promotion and advertising after product approval. Moreover, several of our product development areas may involve relatively new technology and have not been the subject of extensive product testing in humans. The regulatory requirements governing these products and related clinical procedures remain uncertain and the products themselves may be subject to substantial review by foreign governmental regulatory authorities that could prevent or delay approval in those countries. Regulatory requirements ultimately imposed on our products could limit our ability to test, manufacture and, ultimately, commercialize our products and thereby could adversely affect our financial condition and results of operations.

### ***Our business depends upon the success of our research tools as alternatives to current research tools.***

Our success depends on commercial acceptance of our research tools. We believe that adoption of our research tools by our current and future collaborators will be essential for commercial acceptance of our research tools. We cannot assure you that our research tools will be adopted, or if adopted, that they will be broadly accepted by pharmaceutical, biotechnology and diagnostic companies or various academic institutions.

We believe that recommendations by health care professionals and health care payors will be essential for commercial acceptance of our collaborators' or our products. We cannot assure you that the products we or our collaborators develop will achieve commercial acceptance among patients, physicians or third-party payors. Failure to achieve commercial acceptance would materially adversely affect our business, financial condition and results of operations.

### ***We face intense competition which could result in reduced acceptance and demand for our research tools and products.***

The biotechnology industry is subject to intense competition and rapid and significant technological change. We have many potential competitors, including major drug companies, specialized biotechnology firms, academic institutions, government agencies and private and public research institutions. Many of these competitors have significantly greater financial and technical resources, experience and expertise in research and development, preclinical testing, designing and implementing clinical trials; regulatory processes and approvals; production and manufacturing; and sales and marketing of approved products than we have. Principal competitive factors in our industry include the quality and breadth of an organization's technology; management of the organization and the execution of the organization's strategy; the skill and experience of an organization's employees and its ability to recruit and retain skilled and experienced employees; an organization's intellectual property portfolio; the range of capabilities, from target identification and validation to drug and device discovery and development to manufacturing and marketing; and the availability of substantial capital resources to fund discovery, development and commercialization activities.

Large and established companies compete in the biotech market. In particular, these companies have greater experience and expertise than we have in securing government contracts and grants to support their research and development efforts, conducting testing and clinical trials, obtaining regulatory approvals to market products, manufacturing such products on a broad scale and marketing approved products than we have.

Smaller or early-stage companies and research institutions may also prove to be significant competitors, particularly through collaborative arrangements with large and established biotech or other companies, or the obtaining of substantial private financing. We will also face competition from these parties in recruiting and retaining qualified scientific and management personnel.

In order to effectively compete, we will have to make substantial investments in development, testing, manufacturing and sales and marketing or partner with one or more established companies. There is no assurance that we or our collaborators will be successful in commercializing and gaining significant market share for any of products developed in part through use of our technology. Our technologies, products and services also may be rendered obsolete or noncompetitive as a result of products and services introduced by our competitors.

### ***We may have product liability exposure from the sale of our research tools and therapeutic products or the services we provide.***

We may have exposure to claims for product liability. Product liability coverage is expensive and sometimes difficult to obtain. Given our operations to date, we currently do not maintain any product liability insurance coverage. At such point that we determine it is prudent to obtain this insurance, we may not be able to obtain or maintain insurance at a reasonable cost. There can be no assurance that existing insurance coverage will extend to other products in the future. Any product liability insurance coverage may not be sufficient to satisfy all liabilities resulting from product liability claims. A successful claim may prevent us from obtaining adequate product liability insurance in the future on commercially desirable items, if at all. Even if a claim is not successful, defending such a claim would be time-consuming and expensive, may damage our reputation in the marketplace, and would likely divert management's attention.

### ***The near and long-term viability of our products and services will depend on our ability to successfully establish strategic relationships.***

The near and long-term viability of our products and services will depend in part on our ability to successfully establish new strategic collaborations with biotechnology companies, pharmaceutical companies, universities, hospitals, insurance companies and government agencies. Establishing strategic collaborations is difficult and time-consuming. Potential collaborators may reject collaborations based upon their assessment of our financial, regulatory or intellectual property position. If we fail to establish a sufficient number of collaborations on acceptable terms, we may not be able to commercialize our products or generate sufficient revenue to fund further research and development efforts.

Even if we establish new collaborations, these relationships may never result in the successful development or commercialization of any product or service candidates for several reasons both within and outside of our control.

Although our current focus is on providing drug discovery services and research tools in the research setting, we may develop tissue therapeutic products and seek approval to sell them as medical care. Before we could begin commercial manufacturing of any of our product candidates, we or our manufacturers must pass a pre-approval inspection by the FDA and comply with the FDA's current Good Manufacturing Practices. If our manufacturers fail to comply with these requirements, our product candidates would not be approved. If our collaborators fail to comply with these requirements after approval, we would be subject to possible regulatory action and may be limited in the jurisdictions in which we are permitted to sell products.

### ***We will be dependent on third-party research organizations to conduct some of our future laboratory testing, animal and human studies.***

We will be dependent on third-party research organizations to conduct some of our laboratory testing, animal and human studies with respect to therapeutic tissues and other life science products that we may develop in the future. If we are unable to obtain any necessary testing services on acceptable terms, we may not complete our product development efforts in a timely manner. If we rely on third parties for laboratory testing and/or animal and human studies, we may lose some control over these activities and become too dependent upon these parties. These third parties may not complete testing activities on schedule or when we so request. We may not be able to secure and maintain suitable research organizations to conduct our laboratory testing and/or animal and human studies. We are responsible for confirming that each of our clinical trials is conducted in accordance with our general plan and protocol. Moreover, the FDA and foreign regulatory agencies require us to comply with regulations and standards, commonly referred to as good clinical practices, for conducting, recording and reporting



the results of clinical trials to assure that data and reported results are credible and accurate and that the trial participants are adequately protected. Our reliance on third parties does not relieve us of these responsibilities and requirements. If these third parties do not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines, if the third parties need to be replaced or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our pre-clinical development activities or clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval for our future product candidates.

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### ***We may require access to a constant, steady, reliable supply of products.***

To the extent that we develop products for sale, we may be required to complete clinical trials before we can offer such products for sale. Commercialization of products will require access to, or development of, facilities to manufacture a sufficient supply of our product candidates. If we are unable to manufacture our products in commercial quantities, then we will need to rely on third parties. These third-party manufacturers must also receive FDA approval before they can produce clinical material or commercial products. Our products may be in competition with other products for access to these facilities and may be subject to delays in manufacture if third parties give other products greater priority. In addition, we may not be able to enter into any necessary third-party manufacturing arrangements on acceptable terms, or on a timely basis. Furthermore, we would likely have to enter into a technical transfer agreement and share our know-how with the third party manufacturer.

### ***We may rely on third-party suppliers for some our materials.***

We may rely on third-party suppliers and vendors for some of the materials we require in our drug discovery and research tool businesses as well as for the manufacture of any product candidates that we may develop in the future. Any significant problem experienced by one of our suppliers could result in a delay or interruption in the supply of materials to us until such supplier resolves the problem or an alternative source of supply is located. Any delay or interruption could negatively affect our operations.

### ***Violation of government regulations or quality programs could harm demand for our products or services, and the evolving nature of government regulations could have an adverse impact on our business.***

To the extent that our collaborators or customers use our products in the manufacturing or testing processes for their drug and medical device products, such end-products or services may be regulated by the FDA under Quality System Regulations (QSR) or the Centers for Medicare & Medicaid Services (CMS) under Clinical Laboratory Improvement Amendments of 1988 (CLIA'88) regulations. The customer is ultimately responsible for QSR, CLIA'88 and other compliance requirements for their products; however, we may agree to comply with certain requirements, and, if we fail to do so, we could lose sales and customers and be exposed to product liability claims.

Products that are intended for the diagnosis or treatment of disease are subject to government regulation. Our drug discovery and research tool offerings are currently intended for research or investigational uses. Research uses are not subject to FDA or premarket approval or other regulatory requirements. Investigational uses are not subject to FDA premarket approval or most regulatory requirements, but are subject to limited regulatory controls for entities conducting investigational studies.

As we continue to adapt and develop parts of our product line in the future, including tissue-based products in the field of regenerative medicine, the manufacture and marketing of our products will become subject to government regulation in the United States and other countries. In the United States and most foreign countries, we will be required to complete rigorous preclinical testing and extensive human clinical trials that demonstrate the safety and efficacy of a product in order to apply for regulatory approval to market the product.

The steps required by the FDA before our proposed products may be marketed in the United States include performance of preclinical (animal and laboratory) tests; submissions to the FDA of an IDE (Investigational Device Exemption), NDA (New Drug Application), or BLA (Biologic License Application) which must become effective before human clinical trials may commence; performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the product in the intended target population; performance of a consistent and reproducible manufacturing process intended for commercial use; Pre-Market Approval Application ("PMA"); and FDA approval of the PMA before any commercial sale or shipment of the product.

The processes are expensive and can take many years to complete, and we may not be able to demonstrate the safety and efficacy of our products to the satisfaction of such regulatory authorities. The start of clinical trials can be delayed or take longer than anticipated for many and varied reasons, many of which are outside of our control. Safety concerns may emerge that could lengthen the ongoing trials or require additional trials to be conducted. Regulatory authorities may also require additional testing, and we may be required to demonstrate that our proposed products represent an improved form of treatment over existing therapies, which we may be unable to do without conducting further clinical studies. Moreover, if the FDA grants regulatory approval of a product, the approval may be limited to specific indications or limited with respect to our distribution. Expanded or additional indications for approved devices or drugs may not be approved, which could limit our revenues. Foreign regulatory authorities may apply similar limitations or may refuse to grant any approval. Consequently, even if we believe that preclinical and clinical data are sufficient to support regulatory approval for our product candidates, the FDA and foreign regulatory authorities may not ultimately grant approval for commercial sale in any jurisdiction. If our products are not approved, our ability to generate revenues will be limited and our business will be adversely affected.

Even if a product gains regulatory approval, such approval is likely to limit the indicated uses for which it may be marketed, and the product and the manufacturer of the product will be subject to continuing regulatory review, including adverse event reporting requirements and the FDA's general prohibition against promoting products for unapproved uses. Failure to comply with any post-approval requirements can, among other things, result in warning letters, product seizures, recalls, substantial fines, injunctions, suspensions or revocations of marketing licenses, operating restrictions and criminal prosecutions. Any of these enforcement actions, any unanticipated changes in existing regulatory requirements or the adoption of new requirements, or any safety issues that arise with any approved products, could adversely affect our ability to market products and generate revenues and thus adversely affect our ability to continue our business.

We also may be restricted or prohibited from marketing or manufacturing a product, even after obtaining product approval, if previously unknown problems with the product or our manufacture are subsequently discovered and we cannot provide assurance that newly discovered or developed safety issues will not arise following any regulatory approval. With the use of any treatment by a wide patient population, serious adverse events may occur from time to time that initially do not appear to relate to the treatment itself, and only if the specific event occurs with some regularity over a period of time does the treatment become suspect as having a causal relationship to the adverse event. Any safety issues could cause us to suspend or cease marketing of our approved products, possibly subject us to substantial liabilities, and adversely affect our ability to generate revenues.

### ***We are subject to various environmental, health and safety laws.***

We are subject to various laws and regulations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals, emissions and wastewater discharges, and the use and disposal of hazardous or potentially hazardous substances used in connection with our research, including infectious disease agents. We also cannot accurately predict the extent of regulations that might result from any future legislative or administrative action. Any of these laws or regulations could cause us to incur additional expense or restrict our operations. Compliance with environmental laws and regulations may be expensive, and current or future environmental regulations may impair our research, development or production efforts.

***We will depend on our patent portfolio, our licensed technology and other trade secrets in the conduct of our business and must ensure that we do not violate the patent or intellectual rights of others.***

Our success in large part depends on our ability to maintain the proprietary nature of our technology and other trade secrets. To do so, we and our licensors must prosecute and maintain existing patents, obtain new patents and pursue trade secret and other intellectual property protection. We also must operate without infringing the proprietary rights of third parties or allowing third parties infringe our rights. Our research, development and commercialization activities, including any product candidates or products resulting from these activities, may infringe or be claimed to infringe patents owned by third parties and as to which we do not hold licenses or other rights. There may be rights that we are not aware of, including applications that have been filed but not published that, when issued, could be asserted against us. These third parties could bring claims against us that would cause us to incur substantial expenses and, if successful, could cause us to pay substantial damages. Further, if a patent infringement suit were brought against us, we could be forced to stop or delay research, development, manufacturing or sales of the product or biologic treatment candidate that is the subject of the suit.

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In addition, competitors may infringe our patents or the patents of our collaborators or licensors. As a result, we may be required to file infringement claims to counter infringement for unauthorized use. This can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent owned by us is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover our technology. An adverse determination of any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly and could put our patent applications at the risk of not issuing.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation.

***A significant portion of our sales are dependent upon our customers' capital spending policies and research and development budgets, and government funding of research and development programs at universities and other organizations, which are each subject to significant and unexpected decrease.***

Our prospective customers include pharmaceutical and biotechnology companies, academic institutions, government laboratories, and private research foundations. Fluctuations in the research and development budgets at these organizations could have a significant effect on the demand for our products and services. Research and development budgets fluctuate due to changes in available resources, patent expirations, mergers of pharmaceutical and biotechnology companies, spending priorities, general economic conditions, and institutional and governmental budgetary policies, including but not limited to reductions in grants for research by educational institutions. In addition, our business could be seriously damaged by any significant decrease in life sciences research and development expenditures by pharmaceutical and biotechnology companies, academic institutions, government laboratories, or private foundations.

The timing and amount of revenues from customers that rely on government funding of research may vary significantly due to factors that can be difficult to forecast. Research funding for life science research has increased more slowly during the past several years compared to the previous years and has declined in some countries, and some grants have been frozen for extended periods of time or otherwise become unavailable to various institutions, sometimes without advance notice. Government funding of research and development is subject to the political process, which is inherently fluid and unpredictable. Other programs, such as homeland security or defense, or general efforts to reduce the federal budget deficit could be viewed by the United States government as a higher priority. These budgetary pressures may result in reduced allocations to government agencies that fund research and development activities. Past proposals to reduce budget deficits have included reduced National Institute of Health and other research and development allocations. Any shift away from the funding of life sciences research and development or delays surrounding the approval of government budget proposals may cause our customers to delay or forego purchases of our products or services, which could seriously damage our business.

### ***Risks Related to Our Common Stock and Liquidity Risks***

***Our securities are a "Penny Stock" and subject to specific rules governing their sale to investors.***

The SEC has adopted Rule 15c-9 which establishes the definition of a "penny stock," for the purposes relevant to our common stock, as any equity security that has a market price of less than \$5.00 per share or with an exercise price of less than \$5.00 per share, subject to certain exceptions. For any transaction involving a penny stock, unless exempt, the rules require that a broker or dealer approve a person's account for transactions in penny stocks; and the broker or dealer receive from the investor a written agreement to the transaction, setting forth the identity and quantity of the penny stock to be purchased.

In order to approve a person's account for transactions in penny stocks, the broker or dealer must obtain financial information and investment experience objectives of the person; and make a reasonable determination that the transactions in penny stocks are suitable for that person and the person has sufficient knowledge and experience in financial matters to be capable of evaluating the risks of transactions in penny stocks.

The broker or dealer must also deliver, prior to any transaction in a penny stock, a disclosure schedule prescribed by the SEC relating to the penny stock market, which, in highlight form sets forth the basis on which the broker or dealer made the suitability determination; and that the broker or dealer received a signed, written agreement from the investor prior to the transaction.

Generally, brokers may be less willing to execute transactions in securities subject to the "penny stock" rules. This may make it more difficult for investors sell shares of our common stock.

Disclosure also has to be made about the risks of investing in penny stocks in both public offerings and in secondary trading and about the commissions payable to both the broker-dealer and the registered representative, current quotations for the securities and the rights and remedies available to an investor in cases of fraud in penny stock transactions. Finally, monthly statements have to be sent disclosing recent price information for the penny stock held in the account and information on the limited market in penny stocks.

***There is limited trading activity in our common stock and there is no assurance that an active market will develop in the future.***

Recent trading activity in our Common Stock has been limited, averaging 100,000 shares traded per day since our Common Stock began trading February 14, 2012. Further, although our common stock is currently quoted on the OTCQB, trading of our common stock may be extremely sporadic. For example, several days may pass before any shares may be traded. As a result, an investor may find it difficult to dispose of, or to obtain accurate quotations of the price of our common stock. There can be no assurance that a more active market for our common stock will develop, or if one should develop, there is no assurance that it will be sustained. This severely limits the liquidity of our common stock, and would likely have a material adverse effect on the market price of our common stock and on our ability to raise additional capital.

***Because we became public by means of a reverse merger we may not be able to attract the attention of brokerage firms.***

Additional risks may exist since we became public through a "reverse merger." Securities analysts of brokerage firms may not provide coverage of us since there is little incentive to brokerage firms to recommend the purchase of our common stock. No assurance can be given that brokerage firms will want to conduct any secondary offerings on our behalf in the future.

***Compliance with the reporting requirements of federal securities laws can be expensive.***

We are a public reporting company in the United States, and accordingly, subject to the information and reporting requirements of the Exchange Act and other federal securities laws, and the compliance obligations of the Sarbanes-Oxley Act. The costs of preparing and filing annual and quarterly reports and other information with the SEC and furnishing audited reports to stockholders are substantial. In addition, we will incur substantial expenses in connection with the preparation of the Registration Statement and related documents with respect to the registration of resales of the common stock sold in the Offering.

***Applicable regulatory requirements, including those contained in and issued under the Sarbanes-Oxley Act of 2002, may make it difficult for us to retain or attract qualified officers and directors, which could adversely affect the management of its business and its ability to obtain or retain listing of our common stock.***

We may be unable to attract and retain those qualified officers, directors and members of board committees required to provide for effective management because of the rules and regulations that govern publicly held companies, including, but not limited to, certifications by principal executive officers. The enactment of the Sarbanes-Oxley Act has resulted in the issuance of a series of related rules and regulations and the strengthening of existing rules and regulations by the SEC, as well as the adoption of new and more stringent rules by the stock exchanges. The perceived increased personal risk associated with these changes may deter qualified individuals from accepting roles as directors and executive officers.

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Further, some of these changes heighten the requirements for board or committee membership, particularly with respect to an individual's independence from the corporation and level of experience in finance and accounting matters. We may have difficulty attracting and retaining directors with the requisite qualifications. If we are unable to attract and retain qualified officers and directors, the management of our business and our ability to obtain or retain listing of our shares of common stock on any stock exchange (assuming we elect to seek and are successful in obtaining such listing) could be adversely affected.

### ***We may have undisclosed liabilities and any such liabilities could harm our revenues, business, prospects, financial condition and results of operations.***

Even though our pre-merger assets and liabilities were transferred to the Split-Off Shareholders in the Split-Off, there can be no assurance that we will not be liable for any or all of such liabilities. Any such liabilities that survived the Merger could harm our revenues, business, prospects, financial condition and results of operations upon our acceptance of responsibility for such liabilities.

The transfer of the operating assets and liabilities to PSOS, coupled with the Split-Off of PSOS, will result in taxable income to us in an amount equal to the difference between the fair market value of the assets transferred and the pre-merger tax basis of the assets. Any gain recognized, to the extent not offset by our net operating loss carryforward, if any, will be subject to federal income tax at regular corporate income tax rates.

### ***If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or detect fraud. Consequently, investors could lose confidence in our financial reporting and this may decrease the trading price of our stock.***

We must maintain effective internal controls to provide reliable financial reports and detect fraud. We have been assessing our internal controls to identify areas that need improvement. We are in the process of implementing changes to internal controls, but have not yet completed implementing these changes. Failure to implement these changes to our internal controls or any others that it identifies as necessary to maintain an effective system of internal controls could harm our operating results and cause investors to lose confidence in our reported financial information. Any such loss of confidence would have a negative effect on the trading price of our stock.

### ***The price of our common stock may become volatile, which could lead to losses by investors and costly securities litigation.***

The trading price of our common stock is likely to be highly volatile and could fluctuate in response to factors such as:

- actual or anticipated variations in our operating results;
- announcements of developments by us or our competitors;
- the timing of IDE and/or NDA approval, the completion and/or results of our clinical trials
- regulatory actions regarding our products
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- adoption of new accounting standards affecting the our industry;
- additions or departures of key personnel;
- introduction of new products by us or our competitors;
- sales of the our common stock or other securities in the open market; and
- other events or factors, many of which are beyond our control.

The stock market is subject to significant price and volume fluctuations. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been initiated against such a company. Litigation initiated against us, whether or not successful, could result in substantial costs and diversion of our management's attention and resources, which could harm our business and financial condition.

### ***Investors may experience dilution of their ownership interests because of the future issuance of additional shares of our common stock.***

In the future, we may issue additional authorized but previously unissued equity securities, resulting in the dilution of the ownership interests of our present stockholders. We may also issue additional shares of our common stock or other securities that are convertible into or exercisable for our common stock in connection with hiring or retaining employees, future acquisitions, future sales of our securities for capital raising purposes, or for other business purposes. The future issuance of any such additional shares of common stock may create downward pressure on the trading price of our common stock. There can be no assurance that the we will not be required to issue additional shares, warrants or other convertible securities in the future in conjunction with any capital raising efforts, including at a price (or exercise prices) below the price at which shares of our common stock is currently quoted on the OTCQB.

### ***Our common stock is controlled by insiders.***

Our officers and directors beneficially own approximately 22.9% of our outstanding shares of common stock. Such concentrated control may adversely affect the price of our common stock. Investors who acquire our common stock may have no effective voice in the management of our operations. Sales by our insiders or affiliates, along with any other market transactions, could affect the market price of our common stock.

### ***We do not intend to pay dividends for the foreseeable future.***

We have paid no dividends on our common stock to date and it is not anticipated that any dividends will be paid to holders of our common stock in the foreseeable future. While our future dividend policy will be based on the operating results and capital needs of our business, it is currently anticipated that any earnings will be retained to finance our future expansion and for the implementation of our business plan. As an investor, you should take note of the fact that a lack of a dividend can further affect the market value of our stock, and could significantly affect the value of any investment.

## USE OF PROCEEDS

We will not receive any proceeds from the sale of shares of our common stock by the selling security holders. A portion of the shares covered by this prospectus are issuable upon exercise of warrants to purchase our common stock. Upon any exercise of the warrants for cash, the selling security holders would pay us the exercise price of the warrants. Under certain conditions set forth in the warrants, the warrants are exercisable on a cashless basis. If the warrants are exercised on a cashless basis, we would not receive any cash payment from the selling security holders upon any exercise of the warrants. Instead, the selling security holders would satisfy their obligation to pay the exercise price through a formula-based transfer of warrant shares to us. The additional proceeds we could receive from the exercise of such warrants have not yet been earmarked for any specific use beyond working capital needs because there is no certainty that we will ever receive any proceeds from the exercise of such warrants.

The selling security holders will pay any underwriting discounts and commissions and expenses incurred by the selling security holders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling security holders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees and fees and expenses of our counsel and our accountants.

## DIVIDEND POLICY

We have never declared or paid dividends. We do not intend to pay cash dividends on our common stock for the foreseeable future, but currently intend to retain any future earnings to fund the development and growth of our business. The payment of dividends if any, on our common stock will rest solely within the discretion of our board of directors and will depend, among other things, upon our earnings, capital requirements, financial condition, and other relevant factors.

## MARKET FOR COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Prior to February 14, 2012, our Common Stock was available for trading in the over-the-counter market and was quoted on the OTCQB and the OTCBB under the symbol "RERR." Effective February 14, 2012, our stock trades under the symbol "ONVO" and is quoted on the OTCQB. As of the December 31, 2011, there was no bid history for the "ONVO" Common Stock, because the Common Stock had never been traded.

The following table sets forth the high and low last-bid prices for our common stock for the periods indicated, as reported by the OTCQB. The quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission, and may not represent actual transactions.

	2012	
	High	Low
First quarter	\$ 2.63	\$1.24
Second quarter	\$10.90	\$2.00
Third quarter (through July 3)	\$ 3.80	\$2.90
Fourth quarter	\$ —	\$ —

Trades in our Common Stock may be subject to Rule 15c-9 of the Exchange Act, which imposes requirements on broker/dealers who sell securities subject to the rule to persons other than established customers and accredited investors. For transactions covered by the rule, broker/dealers must make a special suitability determination for purchasers of the securities and receive the purchaser's written agreement to the transaction before the sale.

The SEC also has rules that regulate broker/dealer practices in connection with transactions in "penny stocks." Penny stocks generally are equity securities with a price of less than \$5.00 (other than securities listed on certain national exchanges, provided that the current price and volume information with respect to transactions in that security is provided by the applicable exchange or system). The penny stock rules require a broker/dealer, before effecting a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document prepared by the SEC that provides information about penny stocks and the nature and level of risks in the penny stock market. The broker/dealer also must provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker/dealer and its salesperson in the transaction, and monthly account statements showing the market value of each penny stock held in the customer's account. The bid and offer quotations, and the broker/dealer and salesperson compensation information, must be given to the customer orally or in writing before effecting the transaction, and must be given to the customer in writing before or with the customer's confirmation. These disclosure requirements may have the effect of reducing the level of trading activity in the secondary market for shares of our Common Stock. As a result of these rules, investors may find it difficult to sell their shares.

As of March 31, 2012, there were approximately 247 record holders (excluding an indeterminable number of stockholders whose shares are held in street or "nominee" name) of our common stock.

The following table summarizes our compensation plans under which our equity securities are authorized for issuance as of March 31, 2012:

## EQUITY COMPENSATION PLAN INFORMATION

	Number of Shares to be Issued Upon Exercise of Outstanding Stock Options and Restricted Stock Units	Weighted-Average Exercise Price of Outstanding Stock Options	Number of Shares Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by security holders:			
2008 Equity Incentive Plan	896,256	\$ 0.08	—
2012 Equity Incentive Plan	—	—	6,553,986
Equity compensation plans not approved by security holders	—	—	—
<b>Total</b>	<b>896,256</b>	<b>\$ 0.08</b>	<b>6,553,986</b>

## SELLING SECURITY HOLDERS

We are registering the following shares of common stock:

- up to 15,347,987 shares of our common stock which were issued in our private placement (the “Offering”) of units consisting of (i) one share of our common stock and (ii) one warrant to purchase one share of our common stock at an exercise price of \$1.00 per share (the “Units”), with closings of the Offering occurring on each of February 8, 2012 (the “Initial Closing”), February 29, 2012 and March 16, 2012, shares of common stock issued to certain of the selling security holders on the date of the Initial Closing of the Offering in connection with the conversion of our \$1,500,000 in principal amount of 6% convertible promissory notes due March 31, 2012 (the “Bridge Notes”) into 1,525,387 Units and 100,000 shares issued to a consultant;
- up to 15,247,987 shares of our common stock issuable upon the exercise of warrants issued to the selling security holders in our Offering of Units (excluding warrants issued to our placement agents in the Offering) and shares of common stock issuable upon the exercise of warrants issued to certain of the selling security holders on the date of the Initial Closing of the Offering in connection with the conversion of the Bridge Notes into 1,525,387 Units; and
- up to 1,500,000 shares of our common stock issuable upon the exercise of warrants issued to certain selling security holders in connection with the original issuance of our Bridge Notes that were converted into 1,500,000 new warrants on the date of the Initial Closing, each exercisable at a price of \$1.00 per share of our common stock.

The selling security holders may sell some, all or none of their shares. We do not know how long the selling security holders will hold the shares offered hereunder before selling them. We currently have no agreements, arrangements or understandings with the selling security holders regarding the sale of any of the shares by them other than the registration rights agreements referenced below in Description of Securities. The shares offered by this prospectus may be offered from time to time by the selling security holders. As used in this prospectus, the term “selling security holder” includes each of the selling security holders listed below, and any donee, pledgee, transferee or other successor in interest selling shares received after the date of this prospectus from a selling security holder as a gift, pledge, or other non-sale related transfer. The selling security holders may have sold or transferred, in transactions exempt from the registration requirements of the Securities Act, some or all of their shares since the date on which the information in the table is presented. Information about the selling security holders may change over time.

The following table sets forth the name of each selling security holder, the number of shares owned by such selling security holder as of June 1, 2012, the number of shares that may be offered under this prospectus by such selling security holder, and the number of shares of our common stock and the percentage (if one percent or more) of our common stock to be owned by such selling security holder after completion of this offering, assuming that all shares offered hereunder are sold as contemplated herein. The number of shares in the column “Shares of Common Stock Being Offered” represents all of the shares that a selling security holder may offer under this prospectus, which includes the shares issuable upon exercise of the warrants covered by this prospectus. Except as otherwise disclosed in this prospectus (or as disclosed in any document incorporated by reference) including information incorporated, none of the selling security holders has, or within the past three years has had, any position, office or other material relationship with us. The selling security holders have advised us that they may enter into short sales in the ordinary course of their business of investing and trading securities. The selling security holders participating in the Offering have also advised us that no short sales in our securities were entered into by them during the period beginning when the selling security holders obtained knowledge that we were contemplating a private placement and ending upon the public announcement of the Offering. Other than the costs of preparing and providing this prospectus and a registration fee to the SEC, we are not paying any costs relating to the sales by the selling security holders.

Ownership reflected in this table for each selling security holder is based upon information provided to us by the selling security holder and reflects holdings as of June 1, 2012. The percentages of common stock owned after the offering are based on 43,793,241 shares of our common stock outstanding as of June 1, 2012, including the shares of common stock issued in the PPO. Beneficial ownership is determined in accordance with Rule 13d-3(d) promulgated by the SEC under the Exchange Act. In computing the number of shares owned by and the percentage ownership of a selling security holder, shares of common stock that could be issued upon the exercise of outstanding options, warrants or other rights held by that selling security holder that are currently exercisable or exercisable within 60 days of June 1, 2012 are considered outstanding. However, such shares are not included in the shares outstanding as of June 1, 2012 when computing the percentage ownership of each other selling security holder.

Unless otherwise noted, each person or group identified possesses sole voting and investment power with respect to the shares, subject to community property laws where applicable.

<u>Selling Security Holder</u>	<u>Outstanding Shares of Common Stock</u>	<u>Shares of Common Stock Subject to Warrants</u>	<u>Total Shares of Common Stock Beneficially Owned</u>	<u>Shares of Common Stock Being Offered in the Offering (1)</u>	<u>Common Stock Beneficially Owned After Offering (1)</u>	<u>Percent After Offering</u>
Aaron Lehmann	15,000	15,000	30,000	30,000	—	*
ABBA Properties Partnership	70,000	70,000	140,000	140,000	—	*
ACP Partners Fund, LP	125,000	125,000	250,000	250,000	—	*
ACP X, L.P.	900,000	900,000	1,800,000	1,800,000	—	*
Allan Rothstein	25,000	25,000	50,000	50,000	—	*
Andrew Fisher	50,000	50,000	100,000	100,000	—	*
Andrew H. Kaufman	25,000	25,000	50,000	50,000	—	*
Ann S. Totten	25,000	25,000	50,000	50,000	—	*
Arun Virick	5,000	5,000	10,000	10,000	—	*
Aspire Capital Fund, LLC	250,000	250,000	500,000	500,000	—	*



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Aubrey W. Gladstone & Marianne R. Gladstone	50,000	50,000	100,000	100,000	—	*
Banque de Luxembourg—Client Account	100,000	100,000	200,000	200,000	—	*
Barbara S. Dickler Trust	50,000	50,000	100,000	100,000	—	*
Barry Michaels	10,000	10,000	20,000	20,000	—	*
Bob Baltera	25,000	25,000	50,000	50,000	—	*
Bradley Resources Company	65,225	80,225	145,450	145,450	—	*
Bret Shupack	50,000	50,000	100,000	100,000	—	*
Brian & Debbie Keller	17,000	17,000	34,000	34,000	—	*
Brian Bauer	25,000	25,000	50,000	50,000	—	*
Brian Joseph Murphy	25,000	25,000	50,000	50,000	—	*
Brooks & Carmen McCartney JTWROS	50,000	50,000	100,000	100,000	—	*
Bruce Levenbrook	10,000	10,000	20,000	20,000	—	*
Byron C. Hughey	12,500	12,500	25,000	25,000	—	*
Chenies Investor LLC	20,000	20,000	40,000	40,000	—	*
Christine Hassuk	15,000	15,000	30,000	30,000	—	*
Christopher J. Blum & Denise M. Blum JTWROS	30,000	30,000	60,000	60,000	—	*
Christopher Travelle	25,000	25,000	50,000	50,000	—	*
Cinema City Inc.	152,826	302,826	455,652	455,652	—	*
Constance Hoidas	10,000	10,000	20,000	20,000	—	*
CRL Management LLC	150,000	150,000	300,000	300,000	—	*
Cynergy Emerging Growth LLC	101,500	201,500	303,000	303,000	—	*
Daniel W. Armstrong	100,000	100,000	200,000	200,000	—	*
Daniel W. Hummell & Allaire D. Hummell JTWROS	50,000	50,000	100,000	100,000	—	*
David & Lillian Barry	15,000	15,000	30,000	30,000	—	*
David G. Rosen and Julie L. Rosen JTWROS	25,000	25,000	50,000	50,000	—	*
David Hochman	12,688	25,188	37,876	37,876	—	*
David Kovacs	75,000	75,000	150,000	150,000	—	*
Dawn E. Gunter	25,000	25,000	50,000	50,000	—	*
DCG&T Cust FBO John Dempsey IRA	25,000	25,000	50,000	50,000	—	*
DCG&T William C. Stone SEP IRA	20,000	20,000	40,000	40,000	—	*
Deepak H. Aggarwal	10,000	10,000	20,000	20,000	—	*
Delaware Charter Guarantee & Tr FBO Daniel K. Ho IRA	50,000	50,000	100,000	100,000	—	*
Delaware Charter Guarantee & Tr FBO Raymond Coppede RO IRA	75,000	75,000	150,000	150,000	—	*
Delaware Charter Guarantee & Trust Co FBO Bill L. Boad IRA	35,000	35,000	70,000	70,000	—	*
Delaware Charter Guarantee & Trust Cust FBO Graham C. Short IRA	73,000	73,000	146,000	146,000	—	*
Delaware Charter Guarantee & Trust Cust FBO Philip J. Benz IRA	22,500	22,500	45,000	45,000	—	*

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Derek J. Sroufe	50,834	100,834	151,668	151,668	—	*
DIT Equity Holdings, LLC	501,667	601,667	1,103,334	1,103,334	—	*
Douglas Jay Cohen	100,000	100,000	200,000	200,000	—	*
Douglas P. Kaufman	25,000	25,000	50,000	50,000	—	*
ECPC Capital LLC	20,000	20,000	40,000	40,000	—	*
Edward M. Dunn	100,000	100,000	200,000	200,000	—	*
Edward N. and Carol Scott Robinson Revocable Trust April 6, 2005	50,750	100,750	151,500	151,500	—	*
Edward Rosenthal	50,834	100,834	151,668	151,668	—	*
Elisabeth Stephens	25,417	50,417	75,834	75,834	—	*
Eric Del Basso	15,000	15,000	30,000	30,000	—	*
Fabrizio Balestri	20,334	40,334	60,668	60,668	—	*
FEQ Realty, LLC	201,667	301,667	503,334	503,334	—	*
Four Jr. Investments LTD.	200,000	200,000	400,000	400,000	—	*
Gary H. Weitz	35,000	35,000	70,000	70,000	—	*
George Karfunkel	200,000	200,000	400,000	400,000	—	*
Gerald & Lynnette Hannahs JTWROS	100,000	100,000	200,000	200,000	—	*
Gerry Amato	100,000	—	100,000	100,000	—	*
Great American Insurance Company	500,000	500,000	1,000,000	1,000,000	—	*
Great American Life Insurance Company	1,000,000	1,000,000	2,000,000	2,000,000	—	*
Greg Waisanen	10,000	10,000	20,000	20,000	—	*
Harry L. Shufflebarger Revocable Trust	25,000	25,000	50,000	50,000	—	*
Harvey Schilowitz & Linda Schilowitz JTWROS	15,000	15,000	30,000	30,000	—	*
Henry Baumgart	10,000	10,000	20,000	20,000	—	*
Henry Rothman	50,225	65,225	115,450	115,450	—	*
Howard K. Fuguet	20,000	20,000	40,000	40,000	—	*
Hyman Belzberg	87,500	87,500	175,000	175,000	—	*
Ian Stern	10,000	10,000	20,000	20,000	—	*
Immotrend Inc.	250,000	250,000	500,000	500,000	—	*
Irwin Lampert	25,000	25,000	50,000	50,000	—	*
James Calvin MacKenzie LLC	100,000	100,000	200,000	200,000	—	*
James Lawler & Ali Rafie	50,000	50,000	100,000	100,000	—	*
Jason Willis & Amanda Willis	25,000	25,000	50,000	50,000	—	*
Jay Eisen	12,688	25,188	37,876	37,876	—	*
Jeff and Pam Littrell	25,000	25,000	50,000	50,000	—	*
Jeffrey Tarrand	5,000	5,000	10,000	10,000	—	*
JKW Family LTD	225,000	225,000	450,000	450,000	—	*
Joanne B. Schubert	15,000	15,000	30,000	30,000	—	*

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Joel Kovacs	15,000	15,000	30,000	30,000	—	*
John Berding	50,000	50,000	100,000	100,000	—	*
John C. Boyer	40,000	40,000	80,000	80,000	—	*
John C. Ramsay	100,000	100,000	200,000	200,000	—	*
John Campo	50,000	50,000	100,000	100,000	—	*
John E. Dell	100,000	100,000	200,000	200,000	—	*
John F. Neary	10,000	10,000	20,000	20,000	—	*
John Menna	40,000	40,000	80,000	80,000	—	*
John Smith	10,000	10,000	20,000	20,000	—	*
John T. Winebrenner Trust	50,000	50,000	100,000	100,000	—	*
Jonathan Ardrey	10,000	10,000	20,000	20,000	—	*
Kathleen S. McHugh	20,000	20,000	40,000	40,000	—	*
Keith Eisenstark & Mary Beth Walsh	10,000	10,000	20,000	20,000	—	*
Kenneth S. Goodwin	10,000	10,000	20,000	20,000	—	*
Lamar A. Gwaltney	50,834	100,834	151,668	151,668	—	*
Lance Siegall	20,000	20,000	40,000	40,000	—	*
Larry W. Schwartz	30,000	30,000	60,000	60,000	—	*
Lawrence Grossbard	75,000	75,000	150,000	150,000	—	*
Lee K. Barba	50,000	50,000	100,000	100,000	—	*
Lester Petracca	100,000	100,000	200,000	200,000	—	*
Lewis B. Cullman	100,000	100,000	200,000	200,000	—	*
Lincoln Trust FBO Thomas C. Stephens IRA	176,667	201,667	378,334	303,334	75,000	*
Lon E. Bell	50,000	50,000	100,000	100,000	—	*
Loren & Vivian Kramer	25,000	25,000	50,000	50,000	—	*
Louis A. & Brenda K. Romeo	50,000	50,000	100,000	100,000	—	*
Mark F. Adams	5,000	5,000	10,000	10,000	—	*
Mark Volkov	15,000	15,000	30,000	30,000	—	*
Marvin Boehm Family Trust	25,000	25,000	50,000	50,000	—	*
Mary Divett	20,700	15,000	35,700	30,000	5,700	*
Mary L. Marcus-West Declaration of Trust	25,000	25,000	50,000	50,000	—	*
Michael & Sophie Mannarino	50,000	50,000	100,000	100,000	—	*
Michael Cohen	50,000	50,000	100,000	100,000	—	*
Michael J. Garnick	175,000	175,000	350,000	350,000	—	*
Michael J. Pierce	100,000	100,000	200,000	200,000	—	*
Michael L. and Ann J. Hetzner	10,000	10,000	20,000	20,000	—	*
Michael Leiter	70,000	70,000	140,000	140,000	—	*

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Michael Lerner	15,000	15,000	30,000	30,000	—	*
Michael Stephens	25,375	50,375	75,750	75,750	—	*
Michael T. Dolen	428,296	603,296	1,031,592	1,031,592	—	*
Michael Willis	60,000	60,000	120,000	120,000	—	*
Michael Willis and Sharon Willis JTWROS	220,000	220,000	440,000	440,000	—	*
Michael Zimmerman	25,000	25,000	50,000	50,000	—	*
Micro Pipe Fund I, LLC	100,000	100,000	200,000	200,000	—	*
Mitchell Lampert	40,000	40,000	80,000	80,000	—	*
Mondas Investments Ltd.	101,500	201,500	303,000	303,000	—	*
Montague Capital LP	785,000	785,000	1,570,000	1,570,000	—	*
New Century Holdings LLP	25,000	25,000	50,000	50,000	—	*
NYPPEX Holdings, LLC 401K Retirement Plan	25,000	25,000	50,000	50,000	—	*
Paul L. Schumacher	20,600	20,600	41,200	41,200	—	*
Peter C. Gould	25,000	25,000	50,000	50,000	—	*
Peter Einstein	20,000	20,000	40,000	40,000	—	*
Peter P. Parthenis Trust	100,000	100,000	200,000	200,000	—	*
Peter Sabo	25,000	25,000	50,000	50,000	—	*
Philip Berman & Ingrid Berman JTWROS	25,000	25,000	50,000	50,000	—	*
Philip M. Cannella	20,000	20,000	40,000	40,000	—	*
Pierre Charpie	10,000	10,000	20,000	20,000	—	*
ProActive Capital Resources Group LLC	25,375	50,375	75,750	75,750	—	*
QIP Holdings LLC	50,000	50,000	100,000	100,000	—	*
Ralph L. Pawlick	10,000	10,000	20,000	20,000	—	*
Ramos—Lujan Investment Group Corp.	15,000	15,000	30,000	30,000	—	*
Raymond James Cust FBO Bruce Ferguson IRA	25,000	25,000	50,000	50,000	—	*
Raymond Vollintine	400,000	400,000	800,000	800,000	—	*
RBC Capital Markets Cust FBO Laurence G. Allen IRA	50,000	50,000	100,000	100,000	—	*
Renald J. & Catherine C. Anelle JTWROS	25,000	25,000	50,000	50,000	—	*
Richard Lieberman	10,000	10,000	20,000	20,000	—	*
Richard M Spitalny	5,000	5,000	10,000	10,000	—	*
Richard Neustadter	200,000	200,000	400,000	400,000	—	*
Richard Todd Gross	50,000	50,000	100,000	100,000	—	*
RL Vollintine Construction, Inc.	50,000	50,000	100,000	100,000	—	*
Robert D. Burke	50,000	50,000	100,000	100,000	—	*
Robert D. deRose and Susan deRose Family Trust	101,884	201,884	303,768	303,768	—	*
Robert G. Mulchrone Trust	25,000	25,000	50,000	50,000	—	*

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Robert Harris	10,000	10,000	20,000	20,000	—	*
Robert L. Montgomery	50,750	100,750	151,500	151,500	—	*
Robert M. Newsome	250,000	250,000	500,000	500,000	—	*
Robyn Schreiber Irrevocable Trust, Warren Schreiber TTEE	63,500	63,500	127,000	127,000	—	*
Ron Eller & Beth Eller JTWROS	15,000	15,000	30,000	30,000	—	*
Royal Palm Investors, LLC	101,884	201,884	303,768	303,768	—	*
RRC Bio Fund LP	300,000	300,000	600,000	600,000	—	*
Ryan Modesto	50,000	50,000	100,000	100,000	—	*
S. Kent Adams	20,000	20,000	40,000	40,000	—	*
Samuel Belzberg	100,000	100,000	200,000	200,000	—	*
San Diego Psychiatric Medical Group Inc. Combination Retirement Trust	25,000	25,000	50,000	50,000	—	*
Scott Anderson	25,000	25,000	50,000	50,000	—	*
ST Organovo LLC	310,000	310,000	620,000	620,000	—	*
Stacy Paros Parthenis	50,000	50,000	100,000	100,000	—	*
Stan Alex Miroshnik	100,000	100,000	200,000	200,000	—	*
Stan Noah	20,000	20,000	40,000	40,000	—	*
Stephen A. de Kanter	20,000	20,000	40,000	40,000	—	*
Steve M. Payne	200,000	200,000	400,000	400,000	—	*
Terence Oi	25,000	25,000	50,000	50,000	—	*
The Carnahan Trust	200,000	200,000	400,000	400,000	—	*
Thomas G. Wales	33,500	33,500	67,000	67,000	—	*
Tom Stephens	50,750	100,750	151,500	151,500	—	*
UHURU Capital LLC	100,000	100,000	200,000	200,000	—	*
Univest Management Inc. EPSP	50,000	50,000	100,000	100,000	—	*
Vantage FBO Laurence E Lof Roth IRA	50,000	50,000	100,000	100,000	—	*
Vekoe Partners, LLC	25,000	25,000	50,000	50,000	—	*
W. Ron Raecker	20,000	20,000	40,000	40,000	—	*
Wendy S. Flath Revocable Living Trust July 27, 2010	25,417	50,417	75,834	75,834	—	*
White Rock Capital Partners, LP	500,000	500,000	1,000,000	1,000,000	—	*
William Belzberg Revocable Living Trust	87,500	87,500	175,000	175,000	—	*
William C. Purdon & Debra B. Purdon JTWROS	25,000	25,000	50,000	50,000	—	*
William N. Strawbridge	20,000	20,000	40,000	40,000	—	*
William Nowlin	5,000	5,000	10,000	10,000	—	*
William P. Hogan	20,000	20,000	40,000	40,000	—	*
William R. Lefever	150,000	150,000	300,000	300,000	—	*
<b>Total</b>	<b>15,428,687</b>	<b>16,747,987</b>	<b>32,176,674</b>	<b>32,095,974</b>	<b>80,700</b>	<b>*</b>

\* Less than 1.0%

(1) Includes shares of common stock issuable upon the exercise of warrants, and is adjusted to reflect the sale of shares pursuant to this offering.

## PLAN OF DISTRIBUTION

The selling security holders, which as used herein includes donees, pledgees, transferees, or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling security holder as a gift, pledge, partnership distribution, or other transfer, may, from time to time, sell, transfer, or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market, or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

If any of the selling security holders are deemed an “underwriter” within the meaning of Section 2(11) of the Securities Act in connection with the resale of our securities under this prospectus, any commissions received by such selling security holders and any profit on the resale of the shares of our common stock (including the shares of common stock issuable upon the exercise of the warrants) sold by such security holders while acting as principals will be deemed to be underwriting discounts or commissions. Because it will have been deemed to be an underwriter within the meaning of Section 2(11) of the Securities Act, such selling security holders will be subject to prospectus delivery requirements under the Securities Act.

The selling security holders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling security holders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling security holders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling security holders to include the pledgee, transferee or other successors in interest as selling security holders under this prospectus. The selling security holders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees, or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling security holders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling security holders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling security holders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities that require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling security holders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling security holders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants.

The selling security holders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule.

To the extent required, the shares of our common stock to be sold, the names of the selling security holders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling security holders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling security holders and their affiliates. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling security holders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling security holders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling security holders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed to use reasonable efforts to maintain the effectiveness of this registration statement until the earlier of (i) the one year anniversary of the date the registration statement of which this prospectus forms a part is declared effective by the SEC or (ii) until Rule 144 of the Securities Act is available to the selling security holders with respect to all of their shares.

### **Penny Stock Regulations**

You should note that our stock is a penny stock. The SEC has adopted Rule 15g-9, which generally defines “penny stock” to be any equity security that has a market price (as defined) less than \$5.00 per share or an exercise price of less than \$5.00 per share, subject to certain exceptions. Our securities are covered by the penny-stock rules, which impose additional sales-practice requirements on broker-dealers that sell to persons other than established customers and “accredited investors.” The term “accredited investor” refers generally to institutions with assets in excess of \$5,000,000 or individuals with a net worth in excess of \$1,000,000 or annual income exceeding \$200,000 or \$300,000 jointly with their spouse. The penny-stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized-risk disclosure document in a form prepared by the SEC that provides information about penny stocks and the nature and level of risks in the penny-stock market. The broker-dealer also must provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker-dealer and its salesperson in the transaction and monthly account statements showing the market value of each penny stock held in the customer’s account. The bid and offer quotations, and the broker-dealer and salesperson compensation information, must be given to the customer orally or in writing prior to effecting the transaction and must be given to the customer in writing before or with the customer’s confirmation. In addition, the penny-stock rules require that, prior to a transaction in a penny stock not otherwise exempt from these rules, the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser’s written agreement to the transaction. These disclosure requirements may have the effect of reducing the level of trading activity in the secondary market for the stock that is subject to these penny-stock rules. Consequently, these penny-stock rules may affect the ability of broker-dealers to trade our securities. We believe that the penny-stock rules discourage investor interest in and limit the marketability of our common stock.

### **Blue Sky Restrictions on Resale**

If a selling security holder wants to sell shares of our common stock under this prospectus in the United States, the selling security holders will also need to comply with state securities laws, also known as “Blue Sky laws,” with regard to secondary sales. As a result, holders may not resell their shares of common stock in the United States without satisfying the applicable state securities law or qualifying for an exemption therefrom, including the exemptions provided under the U.S. National Securities Markets Improvement Act of 1996. The broker for a selling security holder will be able to advise a selling security holder as to which states our common stock is exempt from registration with that state for secondary sales.

Any person who purchases shares of our common stock from a selling security holder under this prospectus who then wants to sell such shares will also have to comply with Blue Sky laws regarding secondary sales. These restrictions and potential costs could be significant burdens to our stockholders seeking to effect resales of our common stock within the United States.

## DESCRIPTION OF SECURITIES

### Authorized Capital Stock

As of March 31, 2012, our authorized capital stock consisted of 150,000,000 shares of Common Stock, par value \$0.001 per share, and 25,000,000 shares of preferred stock, par value \$0.001 per share.

### Issued and Outstanding Capital Stock

As of March 31, 2012, the following securities were issued and outstanding:

- 43,693,241 shares of common stock;
- No shares of preferred stock;
- Options to purchase 896,256 shares of common stock granted under our equity incentive plans; and
- Warrants to purchase 24,256,932 shares of common stock exercisable at a price of \$1.00 per share.

### Description of Common Stock

The holders of Common Stock are entitled to one vote per share on all matters submitted to a vote of the stockholders, including the election of directors. Generally, all matters to be voted on by stockholders must be approved by a majority (or, in the case of election of directors, by a plurality) of the votes entitled to be cast by all shares of Common Stock that are present in person or represented by proxy. Except as otherwise provided by law, amendments to the certificate of incorporation generally must be approved by a majority of the votes entitled to be cast by all outstanding shares of Common Stock. The certificate of incorporation does not provide for cumulative voting in the election of directors. The Common Stock holders will be entitled to such cash dividends as may be declared from time to time by the Board from funds available. Upon our liquidation, dissolution or winding up, the Common Stock holders will be entitled to receive pro rata all assets available for distribution to such holders.

### Description of Preferred Stock

Our Preferred Stock, par value \$0.001 per share, may be issued from time to time in one or more series pursuant to a resolution or resolutions providing for such issue duly adopted by our Board of Directors (authority to do so being hereby expressly vested in the Board of Directors). The Board of Directors is further authorized, subject to limitations prescribed by law, to fix by resolution or resolutions the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, of any wholly unissued series of Preferred Stock, including without limitation authority to fix by resolution or resolutions the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), redemption price or prices, and liquidation preferences of any such series, and the number of shares constituting any such series and the designation thereof, or any of the foregoing.

### Registration Rights Agreement

We were required to file the registration statement of which this prospectus forms a part pursuant to the terms and provisions of a Registration Rights Agreement. A form of the Registration Rights Agreement is filed as Exhibit 10.5 to the registration statement of which this prospectus forms a part. The holders of any registrable securities removed from the registration statement a result of a Rule 415 or other comment from the SEC shall have "piggyback" registration rights for the shares of common stock or common stock underlying such warrants with respect to any registration statement filed by us following the effectiveness of the registration statement which would permit the inclusion of these shares.

We have agreed to use reasonable efforts to maintain the effectiveness of this registration statement until the earlier of (i) the one year anniversary of the date the registration statement of which this prospectus forms a part is declared effective by the SEC or (ii) until Rule 144 of the Securities Act is available to the selling security holders with respect to all of their shares.

### Anti-Takeover Effects of Provisions of Delaware State Law

Anti-takeover provisions in our certificate of incorporation and Delaware law could make an acquisition more difficult and could prevent attempts by our stockholders to remove or replace current management.

Anti-takeover provisions of Delaware law and in our certificate of incorporation and our bylaws may discourage, delay or prevent a change in control of our company, even if a change in control would be beneficial to our stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. In particular, under our certificate of incorporation our board of directors may issue up to 25,000,000 shares of preferred stock with rights and privileges that might be senior to our common stock,



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without the consent of the holders of the common stock. Moreover, without any further vote or action on the part of the stockholders, the board of directors would have the authority to determine the price, rights, preferences, privileges, and restrictions of the preferred stock. This preferred stock, if it is ever issued, may have preference over, and harm the rights of, the holders of common stock. Although the issuance of this preferred stock would provide us with flexibility in connection with possible acquisitions and other corporate purposes, this issuance may make it more difficult for a third party to acquire a majority of our outstanding voting stock. Similarly, our authorized but unissued common stock is available for future issuance without stockholder approval.

### **Warrants**

Set forth below is information concerning the various warrants issued by us to our investors, placement agents, consultants and other persons.

#### ***Warrants issued to investors in the Offering with closings on February 8, February 29 and March 16.***

After the final closing of the Offering, there were warrants issued to purchase 15,247,987 shares of common stock held by investors purchasing Units in the Offering (the "Investor Warrants"). Each Investor Warrant entitles the holder to purchase one share of common stock at a purchase price of \$1.00 during the five (5) year period commencing on the issuance of the Investor Warrants. We may call the Investor Warrants at any time our common stock trades above \$2.50 for twenty (20) consecutive days following the effectiveness of the registration statement of which this prospectus forms a part covering the resale of the underlying Investor Warrant shares. The Investor Warrants can only be called if a registration statement registering the shares underlying the Investor Warrants is in effect at the time of the call.

The Investor Warrants, at the option of the holder, may be exercised by cash payment of the exercise price to us. The Investor Warrants may be exercised on a cashless basis commencing one year after issuance if no registration statement registering the shares underlying the Investor Warrants is then in effect. The placement agent in the Offering will receive a warrant solicitation fee equal to 5% of the funds solicited by the placement agent upon exercise of the Investor Warrants if we elect to call the Investor Warrants. The exercise price and number of shares of common stock issuable on exercise of the Investor Warrants may be adjusted in certain circumstances including a weighted average adjustment in the event of future issuances of our equity securities at a price less than the exercise price of the Investor Warrant, in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation.

No fractional shares will be issued upon exercise of the Investor Warrants. If, upon exercise of the Investor Warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, round up to the nearest whole number, the number of shares of common stock to be issued to the Investor Warrant holder.

Simultaneous with the Initial Closing of the Offering, former warrant holders and a former noteholder of Organovo were issued warrants to purchase an aggregate of 1,409,750 shares of common stock. These warrants are similar to the Investor Warrants, except that they do not have a call provision or registration rights.

#### ***Warrants issued in exchange for the warrants issued in connection with the Company's bridge financing completed in October and November 2012 (the "Bridge Financing").***

There are 1,500,000 warrants outstanding (the "New Bridge Warrants"), all of which were issued at the Initial Closing of the Offering in exchange for the warrants issued in connection with the Bridge Financing (the "Bridge Warrants"). The New Bridge Warrants, which are exercisable at a price of \$1.00 per share for a five year period, are substantially similar to the Investor Warrants. Holders of the New Bridge Warrants received the same registration rights with respect to the shares of common stock issuable upon exercise of the New Bridge Warrants as the investors in the Offering.

#### ***Warrants issued to the placement agent in connection with the Bridge Financing and Offering.***

The warrants issued to Spencer Trask Ventures, Inc., our placement agent in the Offering, permit the placement agent or its designees, to purchase for a five-year period, 5,489,040 shares of common stock at an exercise price of \$1.00 per share (the "Placement Agent Warrants"). Additionally, as compensation for the Bridge Financing, the placement agent was issued Organovo warrants that were subsequently exchanged for Placement Agent Warrants to purchase 610,155 shares of common stock at an exercise price of \$1.00 per share. The Placement Agent Warrants have no registration rights and contain weighted average anti-dilution and immediate cashless exercise provisions.

## DESCRIPTION OF BUSINESS

### Overview

We have developed and are commercializing a platform technology for the generation of three-dimensional (3D) human tissues that can be employed in drug discovery and development, biological research, and as therapeutic implants for the treatment of damaged or degenerating tissues and organs. We intend to introduce a paradigm shift in the approach to the generation of three-dimensional human tissues, by creation of constructs in 3D that have the potential to replicate native human biology. We can improve on previous technologies by moving away from monolayer 2D cell cultures and by enabling all or part of the tissues we create to be constructed solely of cells. We believe our expertise in printing small-diameter, fully cellular human blood vessels *in vitro* provides a strong foundation upon which other tissues can be built to replicate human biology and human disease. We believe that our broad and exclusive commercial rights to patented and patent-pending 3D bioprinting technology, combined with strengths in engineering and biology, put us in an ideal position to provide a wide array of products for use in research, drug discovery and regenerative medicine therapies.

Our foundational proprietary technology derives from research led by Dr. Gabor Forgacs, a Professor of Biophysics at the University of Missouri. We have a broad portfolio of intellectual property rights covering 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, and outright ownership of six pending patent applications (the patents and patent rights described in this paragraph are sometimes collectively referred to as the “Intellectual Property Rights”). See “—Intellectual Property “.

We believe that our portfolio of Intellectual Property Rights provides a strong and defensible market position for the commercialization of 3D bioprinting technology.

We believe we have the potential to build and maintain a sustainable business by leveraging our core technology platform across a variety of applications. As part of our business strategy we intend to pursue collaboration agreements with drug development companies that will allow us to further develop our 3D bioprinting technology and the potential uses of the cellular structures and tissues that can be produced with our technology. We also plan to develop research products with our 3D bioprinting technology that can be offered to third parties involved in drug discovery. We currently have collaborative research agreements currently in effect with Pfizer, Inc. (“Pfizer”) and United Therapeutic Corporation (“Unither”). We have also secured five federal grants in the aggregate amount of approximately \$955,000 including Small Business Research Innovation grants and developed the NovoGen MMX Bioprinter™ (our first-generation 3D bioprinter) – within two and one half years of opening our first facilities. We believe these corporate achievements provide strong validation for the commercial viability of our technology.

As of March 31, 2012, we had devoted substantially all of our efforts to product development, raising capital and building infrastructure. We did not, as of that date, realize significant revenues from our planned principal operations. Accordingly, we are considered to be in the development stage.

### The Technology

Our technology is centered around a core 3D bioprinting method, represented by our bioprinting instrument, the NovoGen MMX Bioprinter™. The 3D bioprinting technology enables a wide array of tissue compositions and architectures to be created, using combinations of cellular ‘bio-ink’ (building blocks comprised solely of cells), hydrogel (building blocks comprised of biocompatible gels), or hybrid ‘bio-ink’ (building blocks comprised of a mixture of cells and material such as hydrogel). A key distinguishing feature of our bioprinting platform is the ability to generate three-dimensional constructs that have all or some of their components comprised entirely of cells. The fully-cellular feature of our technology enables architecturally- and compositionally-defined 3D human tissues to be generated for *in vitro* use in drug discovery and development to potentially replicate the functional biology of a solid, fully cellular tissue. Furthermore, fully cellular constructs may offer specific advantages for regenerative medicine applications where bioactive cells are required and three-dimensional configuration is necessary, such as augmenting or replacing functional mass in tissues and organs that have sustained acute or chronic damage.

We plan to develop research products with our 3D bioprinting technology that can be offered to third parties involved in drug discovery. We intend to deliver the following products to the market:

- Three-dimensional models of human tissue for utilization in traditional absorption, distribution, metabolism, excretion (ADME) / toxicology (TOX) / and drug metabolism and pharmacokinetics (DMPK) testing in drug development.
- Specific models of human biology or pathophysiology, in the form of three-dimensional human tissues, and for use in drug discovery, development, and delivery.
- Three-dimensional human tissues for use as therapeutic regenerative medicine products, such as blood vessels for bypass grafting, nerve grafts for nerve damage repair and cardiac patches for treatment of heart disease.
- 3D bioprinters for use in medical research.
- A portfolio of consumables for use in 3D bioprinting.

As part of our business strategy we intend to pursue collaboration agreements with drug development companies that will allow us to further develop our 3D bioprinting technology and the potential uses of the cellular structures and tissues that can be produced with our technology. We currently have a collaborative research agreement with Pfizer to develop specific three-dimensional tissue models. We are engaged in the development of specific 3D human tissues to aid Pfizer in discovery of successful therapies in two areas of interest. In addition, in October 2011, we entered into a research agreement with Unither to establish and conduct a research program to discover treatments for pulmonary hypertension using our NovoGen MMX Bioprinter™ technology.

### Market Opportunity

We believe that our bioprinting technology is uniquely positioned to provide three-dimensional human tissues for use in drug discovery and development as well as a broad array of tissues suitable for therapeutic use in regenerative medicine applications. While there are rapid-prototyping printers currently available that build three-dimensional structures out of polymers (often used for prototyping of plastic parts for tools or devices), these instruments are not specifically designed or intended for use with purely cellular inks in building biologic tissues and we do not believe that the firms working on these instruments have the required biology expertise to create tissues using these instruments at this time. There are multiple markets addressable by our technology platform:

- 1) **Specialized Models for Drug Discovery and Development:** The NovoGen MMX Bioprinter™ can produce highly specialized three-dimensional human tissues that can be utilized to model a specific tissue physiology or pathophysiology. Our bioprinting technology has demonstrated the ability to create human blood vessel constructs, and to create fully human tissue containing capillary structures. These capabilities are anticipated to broaden the scope and scale of 3D tissues that can be generated, and to facilitate the development of disease models in such areas as cardiovascular disease, oncology, and fibrosis.
- 2) **Biological Research Tools:** Absorption, distribution, metabolism, excretion (ADME) testing is used to determine which factors enhance or inhibit how a potential drug compound reaches the blood stream. Distribution of a compound can be affected by binding to plasma proteins; age, genetics, and other factors can influence metabolism of a compound; and the presence of certain disease states can have effects on excretion of a compound. Many companies perform ADME studies utilizing various cell-based assays or automated bioanalytical techniques. Drug metabolism and pharmacokinetics (DMPK) testing is a subset of ADME. Determining the DMPK properties of a drug helps the drug developer to understand its safety and efficacy. Toxicology (TOX) testing is a further requirement to determine the detrimental effects of a particular drug on specific tissues. We believe that the NovoGen MMX Bioprinter™ is positioned to deliver highly differentiated products for use in traditional cell-based ADME / TOX / DMPK studies. Products in this arena may replace or complement traditional cell-based assays that typically employ primary hepatocytes, intestinal cell lines, renal epithelial cells and cell lines grown in a traditional two-dimensional format. Importantly, the combination of tissue-like three-dimensionality and human cellular components is believed to provide an advantage over non-human animal systems toward predicting *in vivo* human outcomes.
- 3) **Regenerative Medicine:** The field of regenerative medicine is advancing via multiple strategic approaches in development and practice, including cell therapies and scaffold-based products (+/- cells). The architectural precision and flexibility of our technology may facilitate the optimization, development, and clinical use of three-dimensional tissue constructs. Importantly, our technology offers a next-generation strategy whereby three-dimensional structures can be generated without the use of scaffolding or biomaterial components. The ultimate goal is to enable fully cellular constructs to be generated in a configuration compatible with surgical modes of delivery, thereby enabling restoration of significant functional mass to a damaged tissue or organ.

We believe that our technology can capitalize, via strategic partnerships, on additional market opportunities in the provision of enabling tools for drug discovery and development as well as the discovery and development of therapeutic implants that augment or replace damaged tissues and organs. There are multiple short- and long-term revenue opportunities for us in these areas, including direct sales of 3D human tissue constructs for drug screening and development, licensing fees for commercial access to our technology, and royalties from product enablement, particularly in the area of therapeutic products for regenerative medicine.

### Background on Bioprinting

The formation of ‘bio-ink’ — the cell-based building blocks that can be dispensed by our bioprinter — relies on the demonstrated principle that groups of individual cells will self-assemble to generate aggregates, through the actions of cell surface proteins that bind to each other and form junctions between cells. Furthermore, if two or more compatible self-assembled aggregates are placed in close proximity, under the proper conditions they will fuse to generate larger, more complex structures via physical properties analogous to those that drive fusion of liquid droplets. The concept of tissue liquidity originated in studies of developmental biology, where it was noted that developing tissues have liquid-like properties that enable individual cellular components to pattern each other, migrate, organize, and differentiate. As development progresses, tissues transition from a dynamic viscous liquid state to a more static semi-solid state, largely driven by the compartmentalized organization of cellular components and production within the organized tissue of extracellular matrix proteins that provide the mature tissue with the biomechanical properties required for tissue-specific function.

Figure 1 demonstrates self-assembly and tissue liquidity using cellular aggregates generated from developing chicken heart tissue, showing that two adjacent aggregates will fuse over time and generate a larger cellular structure. This basic behavior can be leveraged to form more complex structures whereby aggregates are arranged in a specific geometry that can recapitulate shapes and architectures commonly found in tissues and organs, including tubes and multi-layered structures.

Figure 2 shows that the phenomenon of aggregate fusion in embryonic tissue can be extended to adult-derived cultured mammalian cells, as demonstrated by the fusion of adult hamster ovary epithelial cell aggregates to form toroid (ring) structures when placed into that geometry and held for about 120 hours.

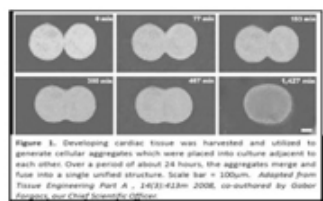


Figure 1. Developing cardiac tissue was harvested and utilized to generate cellular aggregates which were placed into culture adjacent to each other. Over a period of about 24 hours, the aggregates merge and fuse into a single unified structure. Scale bar = 100µm. Adapted from *Tissue Engineering Part A*, 14(2):413-420 2008, co-authored by Galor Danovitch and Paul Vukobratovic.

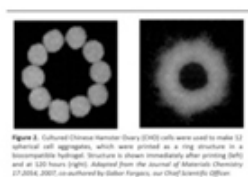


Figure 2. Cultured Chinese hamster ovary (CHO) cells were used to make 11 spherical cell aggregates, which were printed as a ring structure in a bioprinting hydrogel. Structure is shown immediately after printing (left) and at 120 hours (right). Adapted from the *Journal of Materials Chemistry*, 17(2004), 2007, co-authored by Galor Danovitch and Paul Vukobratovic.

### The NovoGen MMX Bioprinter™

Our NovoGen MMX Bioprinter™ is an automated device that enables the fabrication of three-dimensional (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 the dispensing heads to deposit cellular building blocks (‘bio-ink’) or supporting hydrogel. The unit fits easily into a standard biosafety cabinet, eliminating the need to purchase ancillary equipment or make facility modifications to maintain sterility of bioprinted tissues during the printing process. The speed and precision of this instrument enables the production of small-scale tissue models for drug discovery as well as various drug absorption and toxicology assays. The NovoGen MMX Bioprinter™ (Figure 3) went from in-licensing and initial design to commercial production in less than two years.

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We are currently using a third party manufacturer, Invetech Pty., of Melbourne, Australia, to manufacture our NovoGen MMX Bioprinter. Under our manufacturing and supply agreement with Invetech, Invetech has agreed to manufacture our bioprinters for a certain budgeted cost, which cost decreases as we increase the number of bioprinters manufactured. Either party can terminate the manufacturing and supply agreement at any time. Although Invetech is currently a sole source manufacturer for our bioprinters, we believe we can locate a number of other third party manufacturers with the requisite expertise to manufacture our bioprinters without significant delays or costs should Invetech elect to terminate their agreement with us.



**Figure 3.** The NovoGen MMX Bioprinter has a footprint that enables it to fit into a standard biosafety cabinet. Features of the first-generation instrument include two dispensing heads, temperature control, automatic calibration, and a custom software interface for integrated experimental design and instrument control.

The first step in bioprinting is preparation of the bio-ink aggregates, which are typically generated in spherical or cylindrical format. Bio-ink can be generated from a wide variety of cell types, including cell lines, primary cells, stromal cells, epithelial cells, endothelial cells, and progenitor cells. Bio-ink production begins with the creation of a thick ‘cell paste’ comprised of a slurry of cells and containing any other components required to be part of the final tissue composition. The cell paste is into spherical aggregates, cylindrical bio ink, or another building block form. After a maturation period the bio-ink is loaded into the bioprinter, which then dispenses the building blocks in the geometry specified by the user, with a bio-inert hydrogel serving as a physical support for the bioprinted tissue as well as occupying any negative space included in the design.

The NovoGen MMX Bioprinter™ has proved to be a powerful enabling tool for the design, optimization, and fabrication of viable 3D human tissues, based on our internal product discovery and development efforts as well as the experience of our corporate partners and customers. Continuing use of the NovoGen MMX Bioprinter™ in the pursuit of multiple drug discovery and therapeutic applications has provided key insights that will be utilized in the evolution of the bioprinter platform. We believe that purpose-driven improvements and added product features, combined with new capabilities enabled by additional in-licensed intellectual property, will enhance our ability to deliver commercially viable outputs for corporate partners in drug development and implantable therapeutics.

The NovoGen MMX Bioprinter has won the following awards and accolades:

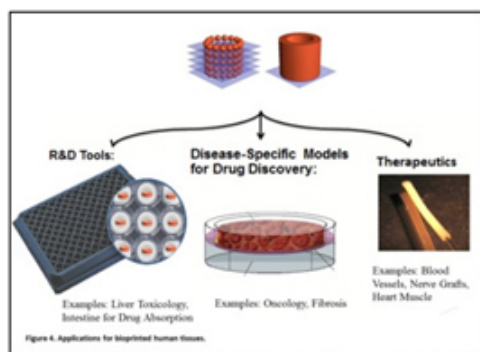
- 2010 International Society for Biofabrication Meeting - Special Award
- 2010 TIME Magazine “50 Best Inventions of 2010”
- 2011 Australian Engineering Innovation Award, sponsored by the Australian government

Organovo was also celebrated as “Dealmaker of the Year 2011—Firm” by the Fermanian Business and Economic Institute and included in MIT Technology Review’s 2012 TR50 List of the World’s Most Innovative Companies.

In 2011 and early 2012 we provided, or will provide, NovoGen MMX Bioprinters™ for use by the following institutions, among others, for research purposes: Harvard Medical School, Wake Forest University, and the Sanford Consortium for Regenerative Medicine (“SCRM”). The SCRM is a new institution which opened in November, 2011, comprised of faculty from the Salk Institute, The Scripps Research Institute, the University of California, San Diego, Sanford-Burnham Medical Research Institute, and La Jolla Allergy and Immunology Institute. We believe that the use of our bioprinting platform by major research institutions will increase the value of the platform and create future opportunities for intellectual property licensing.

### **Specific Applications for 3D Human Tissues**

Our bioprinting technology and surrounding intellectual property and commercial rights serve as a platform for product generation across multiple markets that employ cell- and tissue-based products and services. The core capability of our technology is the production of human tissues with the potential to recapitulate human biology. Once generated, these *in vivo*- like human tissues may be suitable for a variety of applications such as research tools, specialized models of tissue pathobiology, and implantable therapeutics for tissue engineering and regenerative medicine (Figure 4). Importantly, the basic fabrication and maturation protocols that generate functional micro-scale tissues for *in vitro* use will serve as a foundation for the design and manufacture of larger-scale tissues intended for therapeutic use to augment or replace damaged or degenerating organs.



## Collaborative Agreements

As part of our business strategy, we intend to pursue collaboration agreements with drug development companies that will allow us to further develop our bioprinter technology and the potential uses of the cellular structures and tissues that can be produced with our bioprinter technology. Under these collaboration agreements, we and the drug development company will conduct research to pursue drug discovery utilizing the three dimensional cellular structures developed with our bioprinter technology. Currently, drug therapy research and testing generally involves testing drug candidates and therapies on monolayer two dimensional cell cultures that attempt to mimic damaged or degenerating tissues. We believe the use of our technology, which creates three dimensional cellular structures, will enhance and facilitate drug discovery.

Our collaboration agreements typically provide for the parties to mutually develop a research plan and timeline. Each collaboration partner is required to provide the other party reports describing the applicable party's progress under such research plan. Our collaborative agreements generally have a term of the later of one to three years, or the completion by us of the applicable research plan. The agreements provide for certain upfront payments and milestone payments throughout the term related to our research and development obligations under the agreement. In addition, the collaboration agreements provide for a future licensing arrangement between the parties, with royalties payable to us, if the drug development company is successful in identifying a drug candidate or therapy utilizing our bioprinter technology. These agreements also provide customary mutual indemnities and contain standard representations and warranties.

Our first two collaboration agreements are with Pfizer, Inc. ("Pfizer") and United Therapeutics Corporation ("Unither"). In December 2010, we entered into a collaborative research agreement with Pfizer to develop tissue based drug discovery assays in two therapeutic areas utilizing our NovoGen MMX Bioprinter™ technology. To date, Pfizer has paid us all amounts due under the agreement and we anticipate completing the research plan by July 2012. We anticipate that the agreement will be extended past July 2012; although we can give no assurance that it will in fact be so extended. In October 2011, we entered into a research agreement with Unither to establish and conduct a research program to discover treatments for pulmonary hypertension using our NovoGen MMX Bioprinter™ technology, which remains in effect until the later of 30 months from its commencement or our completion of the contracted research. Additionally, under the research agreement with Unither, we granted Unither an option to acquire from us a worldwide, royalty-bearing license in certain intellectual property created under the research agreement solely for use in the treatment or prevention of pulmonary hypertension and all other lung diseases. The license would provide for certain milestone payments and minimum annual royalties and sales-based royalties.

## Federal Grants

We have received five federally funded grants to date. In August, 2009 and August, 2010 we received grants from National Heart, Lung, and Blood Institute, a division of the Department of Health and Human Services, to fund our research in connection with building and testing multi-layered fully biological blood vessel substitutes and bioprinting with specialized adult stem cells derived from adipose (fat) tissue. The total amount of these grants was \$267,625. In October, 2010 we received two grants from the federal government relating to our projects titled "Biological 3D Bioprinted Blood Vessel" and "NovoGen 3D Bioprinter Development." The total amount of these grants was \$397,287. In March 2012, we received a \$290,053 grant from the National Institutes of Health to support the development of functional human liver tissue utilizing our bioprinting technology.

## Competition

We are subject to significant competition from pharmaceutical, biotechnology, and diagnostic companies; academic and research institutions; and government or other publicly-funded agencies that are pursuing the development of research tools and therapeutic products that otherwise address the needs of our potential customers.

We believe our future success will depend, in large part, on our ability to maintain a competitive position in our field. Biopharmaceutical technologies have undergone and are expected to continue to undergo rapid and significant change. We or our competitors may make rapid technological developments which may cause our research tools or therapeutic products to become obsolete before we recover the expenses incurred. The introduction of less expensive or more effective therapeutic discovery and development technologies, including technologies that may be unrelated to our field, may also make our technology less valuable or obsolete. We may not be able to make the necessary enhancements to our technologies or research tools to compete successfully with newly emerging technologies. The failure to maintain a competitive position in the biopharmaceutical field may result in decreased revenues.

We are a platform technology company dedicated to the development and production of 3D human tissues that service both the drug development and regenerative medicine industries. To our knowledge, there are no other companies with a similar platform technology or marketed products.

Set forth below is a discussion of competitive factors for each of the broad markets in which we intend to utilize our technology:

**Highly Specialized Models for Drug Discovery:** This aspect of our business is driven by leveraging our technology as a high-end partnered service that enables a customer to discover or optimally formulate a pharmacologic product that delivers a specific therapeutic effect, or avoids a particular side effect. In addition to revenue generated from the tissue production work, additional revenues are possible in the form of up-front license fees, milestone payments, know-how payments, and royalties. We can provide the customer access to tissues as a service or can produce and supply the tissues to customers; both options are designed to generate continuing revenue. Competition in this area arises mainly from two sources, traditional cell-based *in vitro* culture approaches and traditional *in vivo* animal models and testing.

We believe that an important factor distinguishing our approach from that of our competitors is our ability to build models that are composed of human cells and have a 3D tissue-like configuration (i.e., able to generate results that are not subject to inherent limitations of 2D monolayer culture). We acknowledge, however, that there are some areas of research for which the existing methods (2D cell culture and/or animal studies) are adequate and 3D *in vitro* human tissues are not sufficiently advantageous.

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**Tools for Research and Drug Development:** We intend to employ our technology to provide an array of broadly-applicable enabling tools and assays to the drug research markets. Examples of products in this segment of the business include future pipeline efforts in the development of 3D human tissue models that service the ADME/TOX/DMPK markets as alternatives or supplements to traditional cell-based assays and animal studies, and the NovoGen MMX Bioprinter™ instrument.

Competition in the bioprinter arena has been limited to date. We believe that we have a first mover advantage in being the first and only company to offer a purely cellular bioprinting system commercially, which does not rely on the presence of foreign, non-native polymer in the final tissue construct. Some academic groups have internally created inkjet bioprinting systems, but these systems have not been developed commercially to date and are unlikely to adapt as well to a commercial model.

**Regenerative Medicine:** This aspect of our business involves application of our 3D bioprinting technology to generate 3D human tissues suitable for implantation *in vivo* to augment or replace damaged or degenerating tissues. The majority of these efforts will be undertaken as partnered projects with leading therapeutic companies seeking to develop a tissue engineering / regenerative medicine product for a specific application. Near-term revenues would come from the funding of development work and, in some cases, licensing fees for access to our platform technologies. We expect longer-term revenues may arise from shared profits and royalties or other forms of income from successful clinical and commercial development of the tissue products. There are many companies pursuing the discovery, development, and commercialization of tissue-engineered products for a variety of applications, including but not limited to Organogenesis, Advanced BioHealing (recently acquired by Shire), Tengion, Genzyme (a subsidiary of [Sanofi](#)), HumaCyte and Cytograft Tissue Engineering. These companies represent potential competition for us but can also be potential partners. For any tissue-engineered / regenerative medicine product where three-dimensionality is desired, our platform has a unique ability to enable generation of prototypes, optimization of prototypes and protocols, and production of the tissue.

## **Intellectual Property**

Our success depends in large part on our ability to obtain and enforce patents, maintain protection of trade secrets and operate without infringing the proprietary rights of third parties. We hold exclusive licenses to one U.S. patent, three U.S. patent applications and multiple corresponding international patent applications. We have filed six U.S. patent applications and corresponding international patent applications regarding our technology and its various uses in areas of tissue creation and utilization in drug discovery, including filings for specific tissue types.

In March, 2009, we obtained a world-wide exclusive license to a suite of intellectual property owned or licensed by the University of Missouri-Columbia (“MU”) covering the following two patent applications:

- “Self-Assembling Cell Aggregates and Methods of Making Engineered Tissue Using the Same” (US 10/590,446); and
- “Self-Assembling Multicellular Bodies and Methods of Producing a Three-Dimensional Biological Structure Using the Same” (PCT/US2009/48530) (the “MU 2009 License Agreement”).

The Company received official notification that the U.S. Patent and Trademark Office (the “USPTO”) issued a patent (No. 8,143,055) for the above mentioned patent application. The patent provides the Company with intellectual property rights to create cellular aggregates, to use cellular aggregates to create engineered tissue, and to employ cellular aggregates to create engineered tissue with no scaffold present.

In addition, in March, 2010, we obtained a world-wide exclusive license to additional intellectual property from MU, including a patent application covering the composition and method of manufacture of a nerve conduit (the “MU 2010 License Agreement”, and together with the MU 2009 License Agreement, the “MU License Agreements”). The patent application licensed to us under the MU 2009 License Agreement, entitled “Self-Assembling Multicellular Bodies and Methods of Producing a Three-Dimensional Biological Structure Using the Same” (Serial No. 12/491,228), of which an issue notification has been mailed by the U.S. Patent and Trademark Office assigning a projected U.S. Patent No. of 8,143,055, is expected to expire in June 2029. The remaining two patent applications licensed under the MU License Agreements are still under review at the U.S. Patent and Trademark Office.

Each of the MU License Agreements required us to make an upfront payment ranging from \$5,000 to \$25,000. They also require us to pay royalties ranging from 1% to 3% of net sales depending on the level of net sales reached and certain minimum annual royalties ranging from \$5,000 to \$25,000. Additionally, the MU 2010 License Agreement requires us to pay a minimum royalty of \$12,500 if no net sales are achieved after five years from the effective date. Additionally, we are required to pay 20% of all revenue derived from any sublicense we grant under any of the MU License Agreements. The MU License Agreements terminate upon the last to expire licensed patents and may be terminated upon breach of either party, subject to standard cure provisions.

Dr. Gabor Forgacs, one of our Founders and Scientific Advisors, is the common inventor of all of these works (the “Forgacs Intellectual Property”). The Forgacs Intellectual Property is the result of years of research by Dr. Gabor Forgacs, the George H. Vineyard Professor of Biophysics at the University of Missouri-Columbia and his collaborators and research teams. Dr. Forgacs is a sought after expert in biofabrication with a long record of peer-reviewed publications. The Forgacs Intellectual Property derives from work done in the labs of Dr. Forgacs and his collaborators, including the work done under a \$5,000,000 Frontiers In Biological Research grant that Dr. Forgacs and his collaborators received from the National Science Foundation.

The Forgacs Intellectual Property provides us with intellectual property rights to create cellular aggregates, to use cellular aggregates to create engineered tissue, and to employ cellular aggregates to create engineered tissue with no scaffold present. The intellectual property rights derived from the Forgacs Intellectual Property also enables us to utilize our NovoGen MMX Bioprinter™ to create engineered tissues, and provides us with rights to specific compositions with utility in the creation of nerve conduit.

In May, 2011, we obtained an exclusive license (the “CURF License Agreement”) to a patent entitled “Ink Jet Printing of Viable Cells” (US 7,051,654) from the Clemson University Research Foundation (“CURF Patent”). The Clemson University Research Foundation had been granted certain rights allowing it to offer exclusive rights to the CURF Patent. The CURF Patent provides us with the intellectual property rights to methods of using ink-jet printer technology to dispense cells, and to create matrices of bioprinted cells on gel materials. This patent is expected to expire in May 2024.

The CURF License Agreement requires us to make an upfront payment of \$32,500, payable in four quarterly payments with the last payment due in April 2012. Additionally, the CURF License Agreement requires us to pay royalties ranging from 1.5% to 3% of net sales depending on the level of net sales reached and minimum annual royalties ranging from \$20,000 to \$40,000. Additionally, we are required to pay 40% of all revenue derived from any sublicense we grant under the CURF License Agreement. The CURF License Agreement terminates upon the last to expire licensed patents and may be terminated upon breach of either party, subject to standard cure provisions.

Under our license arrangements, we have full control and authority over the development and commercialization of any licensed products, including clinical trials, manufacturing, marketing, and regulatory filings. We were required to submit and have submitted plans for commercialization of all technologies and are

required to make efforts to pursue commercial development of the technology. We are required to make payments on an annual basis after commercialization to maintain the license rights.

We currently have U.S. patent applications pending to protect our proprietary methods and processes and have also filed, and intend to file, corresponding foreign patent applications. We believe that protection of the proprietary nature of our products and technologies is essential to our business. Accordingly, we have adopted and will continue a vigorous program to secure and maintain protection of our proprietary methods and processes. We file patent applications with respect to novel



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technology, and improvements thereof that are important to our business. We also rely upon trade secrets, unpatented know-how, continuing technological innovation and the pursuit of licensing opportunities to develop and maintain our competitive position. There can be no assurance that others will not independently develop substantially equivalent proprietary technology or that we can meaningfully protect our proprietary position.

### **Regulatory Considerations**

We are not aware of any current FDA regulatory requirements for sales of research tools, such as bioprinters and bioprinted tissues, into a research setting. However, pharmaceutical industry corporate customers with whom we will enter into partnerships will face regulatory review of the research data they generate using our platform and research tools. Good Laboratory Practice (GLP) data is required in the development of any human therapeutic, and our platform has been designed to support compliance with GLP, although no independent testing has been performed to date to confirm this compliance. All product contact surfaces are sterilizable or disposable. GLP considerations around areas such as data integrity are the sole responsibility of the customer without regard to specifics of the research tool used.

Therapeutic tissues and other regenerative medicine products are subject to an extensive and uncertain regulatory approval process by the Food and Drug Administration (FDA) and comparable agencies in other countries. The regulation of new products is extensive, and the required process of laboratory testing and human studies is lengthy and expensive. The burden of these regulations will fall on our collaborating partners, or may be shared with us, to the extent that we are developing proprietary products that are the result of a collaboration effort. The burden of these regulations will fall on us to the extent we are developing proprietary products on our own. We may not be able to obtain FDA approvals for those products in a timely manner, or at all. We may encounter significant delays or excessive costs in our efforts to secure necessary approvals or licenses. Even if we obtain FDA regulatory approvals, the FDA extensively regulates manufacturing, labeling, distributing, marketing, promotion and advertising after product approval. Moreover, several of our product development areas may involve relatively new technology and have not been the subject of extensive product testing in humans. The regulatory requirements governing these products and related clinical procedures remain uncertain and the products themselves may be subject to substantial review by foreign governmental regulatory authorities that could prevent or delay approval in those countries. Regulatory requirements ultimately imposed on our products could limit our ability to test, manufacture and, ultimately, commercialize our products and thereby could adversely affect our financial condition and results of operations.

As constructs move into clinical and commercial settings, use of a validated and Good Tissue Practices ( *GTP* ) Quality system will be required. Suitable design and documentation for clinical use of the bioprinter will be a part of future phases of printer design programs.

### **Employees**

As of June 1, 2012, we have twenty-seven employees, of whom eighteen are employed full time. We also engage consultants and temporary employees from time to time to provide services that relate to our bioprinting business and technology as well as for general administrative and accounting services.

### **Available Information**

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Reports filed with the SEC pursuant to the Exchange Act, including annual and quarterly reports, and other reports we file, can be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. Investors may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. Investors can request copies of these documents upon payment of a duplicating fee by writing to the SEC. The reports we file with the SEC are also available on the SEC's website (<http://www.sec.gov>).

## **DESCRIPTION OF PROPERTY**

We lease office and laboratory space in two locations in San Diego. Our primary office, including administrative and laboratory space, is located at the Oberlin Science Center, 5871 Oberlin Drive, San Diego, CA 92121. We also lease additional office space at 5897 Oberlin Drive, San Diego, CA 92121. Our current monthly base rent for our primary facility is \$11,486 and our currently monthly base rent for our additional office space is \$1,112.

We have entered into a lease agreement with our current landlord on a facility currently undergoing renovation, which we expect to occupy in July or August 2012. The new facility will house all of our operations under one roof, replacing the two facilities we now rent at a new base rate of \$38,848. The new facility provides approximately three times our existing space and is expected to meet our business, research and operational needs for at least two years. The new facility will be delivered "turnkey", thereby minimizing our need to utilize capital to fund tenant improvements to the laboratory or office spaces.

## **LEGAL PROCEEDINGS**

From time to time we may be named in claims arising in the ordinary course of business. Currently, no legal proceedings, government actions, administrative actions, investigations or claims are pending against us or involve us that, in the opinion of our management, could reasonably be expected to have a material adverse effect on our business and financial condition.

We anticipate that we will expend significant financial and managerial resources in the defense of our intellectual property rights in the future if we believe that our rights have been violated. We also anticipate that we will expend significant financial and managerial resources to defend against claims that our products and services infringe upon the intellectual property rights of third parties.

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**Organovo, Inc.  
Financial Statements**

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**Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Stockholders of

**Organovo, Inc.**

San Diego, California

We have audited the accompanying balance sheets of **Organovo, Inc.** (the “Company”) as of December 31, 2011 and 2010, and the related statements of operations, stockholders’ deficit, and cash flows for the years then ended and for the period from April 19, 2007 (Inception) through December 31, 2011. 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 conducted our audits in accordance with the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company’s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of **Organovo, Inc.** as of December 31, 2011 and 2010, and the results of its operations and its cash flows for the years then ended and for the period from April 19, 2007 (Inception) through December 31, 2011, in conformity with accounting principles generally accepted in the United States of America.

/s/ Mayer Hoffman McCann P.C.

San Diego, CA

March 30, 2012

**Organovo, Inc.**  
**(A development stage company)**

**Balance Sheets**

	<u>December 31, 2011</u>	<u>December 31, 2010</u>
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 339,607	\$ 285,308
Grant receivable	—	59,744
Inventory	291,881	68,022
Deferred financing costs	318,843	—
Prepaid expenses and other current assets	79,874	11,042
Total current assets	<u>1,030,205</u>	<u>424,116</u>
<b>Fixed Assets - Net</b>	<b>278,208</b>	<b>295,539</b>
<b>Other Assets - Net</b>	<b>100,419</b>	<b>40,743</b>
Total assets	<u>\$ 1,408,832</u>	<u>\$ 760,398</u>
<b>Liabilities and Stockholders' Deficit</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 657,560	\$ 284,217
Accrued expenses	437,837	305,580
Deferred revenue	152,500	106,925
Related party note payable	—	25,000
Accrued interest payable	24,018	251,536
Convertible notes payable, current portion	703,833	200,000
Total current liabilities	<u>1,975,748</u>	<u>1,173,258</u>
Warrant liabilities	1,266,869	—
Convertible notes payable, long-term portion	—	1,887,500
Total liabilities	<u>\$ 3,242,617</u>	<u>\$ 3,060,758</u>
<b>Commitments and contingencies (Note 10)</b>		
<b>Stockholders' Deficit</b>		
Common stock, \$0.0001 par value; 75,000,000 shares authorized, 22,445,254 and 14,707,020 shares issued and outstanding at December 31, 2011 and December 31, 2010, respectively	2,245	1,471
Additional paid-in capital	4,855,526	6,463
Deficit accumulated during the development stage	<u>(6,691,556)</u>	<u>(2,308,294)</u>
Total stockholders' deficit	<u>(1,833,785)</u>	<u>(2,300,360)</u>
<b>Total Liabilities and Stockholders' Deficit</b>	<u>\$ 1,408,832</u>	<u>\$ 760,398</u>

*The accompanying notes are an integral part of these financial statements.*

**Organovo, Inc.**  
**(A development stage company)**

**Statements of Operations**

	Year Ended December 31, 2011	Year Ended December 31, 2010	Period from April 19, 1997 (Inception) through December 31, 2011
<b>Revenue</b>			
Product	\$ 223,500	\$ —	\$ 223,500
Collaborations	688,088	75,000	763,088
Grants	56,925	528,412	664,112
<b>Total Revenue</b>	<b>968,513</b>	<b>603,412</b>	1,650,700
Cost of product revenue	133,607	—	133,607
Selling, general, and administrative expenses	1,705,171	577,914	2,666,038
Research and development expenses	1,419,718	1,203,716	3,198,388
<b>Loss from Operations</b>	<b>(2,289,983)</b>	<b>(1,178,218)</b>	(4,347,333)
<b>Other Income (Expense)</b>			
Interest expense	(2,066,889)	(160,873)	(2,318,442)
Interest income	64	81	2,007
Other expense	(26,454)	316	(27,788)
<b>Total Other Income (Expense)</b>	<b>(2,093,279)</b>	<b>(160,476)</b>	(2,344,223)
<b>Net Loss</b>	<b>\$ (4,383,262)</b>	<b>\$ (1,338,694)</b>	\$ (6,691,556)

*The accompanying notes are an integral part of these financial statements.*

**Organovo, Inc.**  
**(A development stage company)**

**Statements of Stockholders' Deficit**  
*Period from April 19, 2007 (Inception) through December 31, 2011*

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total
	Shares	Amount			
<b>Balance at inception (April 19, 2007)</b>	—	\$ —	\$ —	\$ —	\$ —
Issuance of Common stock	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—
Net Loss	—	—	—	—	—
<b>Balance at December 31, 2007</b>	—	\$ —	\$ —	\$ —	\$ —
Issuance of Common stock to founders	1,729,532	173	(173)	—	—
Issuance of restricted Common stock	12,627,697	1,263	(1,263)	—	—
Stock-based compensation expense	—	—	1,742	—	1,742
Net Loss	—	—	—	(97,559)	(97,559)
<b>Balance at December 31, 2008</b>	<b>14,357,229</b>	<b>\$ 1,436</b>	<b>\$ 306</b>	<b>\$ (97,559)</b>	<b>\$ (95,817)</b>
Issuance of restricted Common stock	130,422	13	(13)	—	—
Stock-based compensation expense	—	—	2,336	—	2,336
Net Loss	—	—	—	(872,041)	(872,041)
<b>Balance at December 31, 2009</b>	<b>14,487,651</b>	<b>\$ 1,449</b>	<b>\$ 2,629</b>	<b>\$ (969,600)</b>	<b>\$ (965,522)</b>
Issuance of restricted Common stock	219,369	22	(22)	—	—
Stock-based compensation expense	—	—	3,856	—	3,856
Net Loss	—	—	—	(1,338,694)	(1,338,694)
<b>Balance at December 31, 2010</b>	<b>14,707,020</b>	<b>\$ 1,471</b>	<b>\$ 6,463</b>	<b>\$ (2,308,294)</b>	<b>\$ (2,300,360)</b>
Issuance of Common stock through conversion of notes payable	7,676,828	768	3,488,990	—	3,489,758
Issuance of restricted Common stock	61,406	6	(6)	—	—
Warrants issued with convertible notes and upon conversion of notes payable	—	—	1,111,364	—	1,111,364
Beneficial conversion feature of convertible notes payable	—	—	239,700	—	239,700
Stock-based compensation expense	—	—	9,015	—	9,015
Net Loss	—	—	—	(4,383,262)	(4,383,262)
<b>Balance at December 31, 2011</b>	<b>22,445,254</b>	<b>\$ 2,245</b>	<b>\$ 4,855,526</b>	<b>\$ (6,691,556)</b>	<b>\$ (1,833,785)</b>

*The accompanying notes are an integral part of these financial statements.*

**Organovo, Inc.**  
**(A development stage company)**

**Statements of Cash Flows**

	Year Ended December 31, 2011	Year Ended December 31, 2010	Period from April 19, 2007 (Inception) through December 31, 2011
<b>Cash Flows From Operating Activities</b>			
Net loss	\$ (4,383,262)	\$ (1,338,694)	\$ (6,691,556)
Adjustments to reconcile net loss to net cash used in operating activities:			
Amortization of debt discount	1,187,569	—	1,187,569
Depreciation and amortization	68,064	58,669	156,328
Amortization of deferred financing costs	119,451	—	119,451
Warrants issued in connection with exchange agreement	527,629	—	527,629
Stock-based compensation	9,015	3,856	16,949
Change in fair value of warrants	6,569	—	6,569
Increase (decrease) in cash resulting from changes in:			
Grants receivable	59,744	(54,846)	—
Inventory	(223,859)	(68,022)	(291,881)
Prepaid expenses and other current assets	(68,693)	(2,409)	(93,005)
Accounts payable	373,343	230,165	657,560
Accrued expenses	132,257	83,404	437,837
Deferred revenue	45,575	106,925	152,500
Accrued interest payable	232,240	160,856	483,776
<b>Net cash used in operating activities</b>	<b>(1,914,358)</b>	<b>(820,096)</b>	<b>(3,330,274)</b>
<b>Cash Flows From Investing Activities</b>			
Purchases of fixed assets	(45,547)	(48,072)	(426,823)
Purchases of intangible assets	(65,000)	(5,000)	(95,000)
<b>Net cash used in investing activities</b>	<b>(110,547)</b>	<b>(53,072)</b>	<b>(521,823)</b>
<b>Cash Flows From Financing Activities</b>			
Proceeds from issuance of convertible notes payable	2,542,500	992,500	4,630,000
Proceeds from issuance of related party notes payable	225,000	25,000	250,000
Repayment of related party notes payable	(250,000)	—	(250,000)
Deferred financing costs	(438,296)	—	(438,296)
<b>Net cash provided by financing activities</b>	<b>2,079,204</b>	<b>1,017,500</b>	<b>4,191,704</b>
<b>Net Increase in Cash and Cash Equivalents</b>	<b>54,299</b>	<b>144,332</b>	<b>339,607</b>
<b>Cash and Cash Equivalents at Beginning of Period</b>	<b>285,308</b>	<b>140,976</b>	<b>—</b>
<b>Cash and Cash Equivalents at End of Period</b>	<b>\$ 339,607</b>	<b>\$ 285,308</b>	<b>\$ 339,607</b>

*The accompanying notes are an integral part of these financial statements.*

**Supplemental Disclosures of Cash Flow Information:**

Interest	\$ —	\$ —	\$ —
Income Taxes	\$ 800	\$ 1,600	\$ 2,400

**Supplemental Disclosure of Noncash Investing and Financing Activities:**

During 2008 the Company issued 1,729,532 shares of Common stock to the founders.

During 2011 and 2010 and for the period from April 19, 2007 (Inception) through December 31, 2011, the Company issued 61,406, 219,369 and 13,038,894, respectively, shares of restricted Common stock to certain employees, advisors and consultants of the Company.

During 2011 and for the period from April 19, 2007 (Inception) through December 31, 2011, the Company issued certain convertible notes payable that included warrants. The warrants and the related beneficial conversion feature, valued at \$823,435 were classified as equity instruments and recorded as a discount to the carrying value of the related debt.

During 2011 and for the period from April 19, 2007 (Inception) through December 31, 2011, the Company issued warrants, valued at approximately \$1,260,300, in connection with certain convertible notes payable. The warrants were recorded as a warrant liability and recorded as a discount to the carrying value related to debt.

During 2011, the Company issued 7,676,828 shares of Common stock to note holders for the conversion of Convertible Notes with a principal balance totaling \$3,030,000 and accrued interest totaling \$459,758.

**1. Summary of Significant Accounting Policies**

A summary of the Company's significant accounting policies consistently applied in the preparation of the accompanying financial statements follows.

*Nature of operations*

**Organovo, Inc.** ("the Company") was founded in Delaware in April 2007 and is a Delaware Corporation. Activities since the Company's inception through 2011 were devoted primarily to developing a platform technology for the generation of three-dimensional (3D) human tissues that can be employed in drug discovery and development, biological research, and as therapeutic implants for the treatment of damaged or degenerating tissues and organs.

As of December 31, 2011, the Company has devoted substantially all of its efforts to product development, raising capital, and building infrastructure. The Company has not realized significant revenues from its planned principal operations. Accordingly, the Company is considered to be in the development stage.

On February 8, 2012, the Company merged with and into Organovo Acquisition Corp., a wholly-owned subsidiary of Organovo Holdings, Inc., a publicly traded Delaware corporation ("Organovo Holdings"), with the Company surviving the merger as a wholly-owned subsidiary of Organovo Holdings (the "Merger"). As a result of the Merger, Organovo Holdings acquired the business of the Company, and will continue the existing business operations of the Company.

*Liquidity*

As of December 31, 2011, the Company had an accumulated deficit of approximately \$6,691,600. The Company also had negative cash flow from operations of \$1,914,400 during the year ended December 31, 2011.

The Company expects to cover its anticipated 2012 operating expenses through cash on hand including the funds raised during the first quarter of 2012 through the Private Placement of its Securities and funds received through collaborative agreements, and other commercial arrangements.

On February 8, 2012, the Company received gross proceeds of approximately \$6,500,000, including \$1,500,000 previously received from the sale of convertible notes payable, in a private placement offering in conjunction with the Merger. The convertible notes automatically converted into equity at the time of the Merger. On February 29, 2012 and March 16, 2012, the Company completed two additional closings of its Private Placement Offering and received total gross proceeds of approximately \$8,722,100. See Note 12.

While the likelihood of a liquidity crisis is considered remote, should one occur, there are no guarantees that the Company would be able to obtain sufficient cash from outside sources on a timely basis. Management does not believe the situation represents a significant risk to the Company as of the date of these financial statements.

The Company's ability to continue its operations is dependent upon its ability to raise additional capital through equity or debt financing, and to generate capital through collaborative research agreements and other commercial arrangements. There can be no assurance that any additional financing will be available on acceptable terms or available at all. Any equity financing may result in dilution to existing stockholders and any debt financing may include restrictive covenants.

The accompanying financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of these uncertainties.



<i>Use of estimates</i>	<p>The preparation of the financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates. Significant estimates used in preparing the financial statements include those assumed in computing the valuation of warrants and conversion features, revenue recognized under the proportional performance model, the valuation of stock-based compensation expense, and the valuation allowance on deferred tax assets.</p>
<i>Cash and cash equivalents</i>	<p>The Company considers all highly liquid investments with original maturities of 90 days or less to be cash equivalents.</p>
<i>Financial instruments</i>	<p>For certain of the Company's financial instruments, including cash and cash equivalents, grants receivable, inventory, prepaid expenses and other assets, accounts payable, accrued expenses, deferred revenue, notes payable to related parties and convertible notes payable, the carrying amounts are generally considered to be representative of their respective fair values because of the short-term nature of those instruments.</p>
<i>Derivative financial instruments</i>	<p>The Company does not use derivative instruments to hedge exposures to cash flow, market or foreign currency risks.</p> <p>The Company reviews the terms of convertible debt and equity instruments it issues to determine whether there are embedded derivative instruments, including an embedded conversion option that is required to be bifurcated and accounted for separately as a derivative financial instrument. In circumstances where the convertible instrument contains more than one embedded derivative instrument, including the conversion option, that is required to be bifurcated, the bifurcated derivative instruments are accounted for as a single, compound derivative instrument. Also, in connection with the sale of convertible debt and equity instruments, the Company may issue freestanding warrants that may, depending on their terms, be accounted for as derivative instrument liabilities, rather than as equity.</p> <p>Derivative instruments are initially recorded at fair value and are then revalued at each reporting date with changes in the fair value reported as non-operating income or expense. When the convertible debt or equity instruments contain embedded derivative instruments that are to be bifurcated and accounted for as liabilities, the total proceeds allocated to the convertible host instruments are first allocated to the fair value of all the bifurcated derivative instruments. The remaining proceeds, if any, are then allocated to the convertible instruments themselves, usually resulting in those instruments being recorded at a discount from their face value.</p> <p>The discount from the face value of the convertible debt, together with the stated interest on the instrument, is amortized over the life of the instrument through periodic charges to interest expense, using the effective interest method.</p>
<i>Grants receivable</i>	<p>Grants receivable represent amounts due under: (i) two federal contracts with the National Heart, Lung, and Blood Institute (NHLBI), a division of the National Institutes of Health (NIH), and (ii) two U.S. Department of Treasury grant awards. The Company considers the grants receivable to be fully collectible, and accordingly no allowance for doubtful amounts has been established. If amounts become uncollectible, they are charged to operations.</p>

<i>Inventory</i>	<p>Inventories are stated at the lower of the cost or market (first-in, first out). Inventory at December 31, 2011, consisted of approximately \$235,000 in finished goods and approximately \$56,900 in raw materials. Inventory at December 31, 2010 consisted of approximately \$40,000 of work in process and approximately \$28,000 in raw materials.</p> <p>The Company provides inventory allowances based on excess or obsolete inventories determined based on anticipated use in the final product. There was no obsolete inventory reserve as of December 31, 2011 or 2010.</p>
<i>Deferred financing costs</i>	<p>As of December 31, 2011, deferred financing costs consisted of approximately \$140,000 associated with the Merger transaction and approximately \$179,000 associated with the private placement offering that was initiated in the fourth quarter of 2011. The deferred financing costs related to the private placement offering are being amortized over the life of the Convertible Notes. The deferred financing costs associated with the Merger transaction will be recorded to equity as an offset to the proceeds received as of the effective Merger date. See Note 5.</p>
<i>Other assets</i>	<p>As of December 31, 2011, other assets consisted of approximately \$13,100 in security deposits and \$87,300 in net license fees related to a license obtained from Clemson University for bioprinting employing ink-jet technology, and a license obtained from the University of Missouri for 3D bioprinting. See Note 8.</p>
<i>Fixed assets and depreciation</i>	<p>Property and equipment are carried at cost. Expenditures that extend the life of the asset are capitalized and depreciated. Depreciation and amortization are provided using the straight-line method over the estimated useful lives of the related assets or, in the case of leasehold improvements, over the lesser of the useful life of the related asset or the lease term. The estimated useful life of the fixed assets range between three and ten years.</p>
<i>Impairment of long-lived assets</i>	<p>In accordance with authoritative guidance the Company reviews its long-lived assets, including property and equipment and other assets, for impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be fully recoverable. To determine recoverability of its long-lived assets, the Company evaluates whether future undiscounted net cash flows will be less than the carrying amount of the assets and adjusts the carrying amount of its assets to fair value. Management has determined that no impairment of long-lived assets occurred in the period from inception through December 31, 2011.</p>
<i>Fair value measurement</i>	<p>Financial assets and liabilities are measured at fair value, which 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. The following is a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value:</p>

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

As of December 31, 2011 and 2010, cash and cash equivalents were comprised of cash in checking accounts.

The Company used Level 3 inputs for its valuation methodology for the warrant derivative liabilities. The estimated fair values were determined using a Monte Carlo option pricing model based on various assumptions (see Note 4). The Company's derivative liabilities are adjusted to reflect estimated fair value at each period end, with any decrease or increase in the estimated fair value being recorded in other income or expense accordingly, as adjustments to fair value of derivative liabilities.

At December 31, 2011, the estimated fair values of the liabilities measured on a recurring basis are as follows:

**Fair Value Measurements at December 31, 2011**

	Balance at December 31, 2011	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Unobservable Inputs (Level 3)
Warrant derivative liability	\$ 1,266,869	—	—	\$ 1,266,869

The following table presents the activity for liabilities measured at estimated fair value using unobservable inputs for the year ended December 31, 2011:

**Fair Value Measurements Using Significant Unobservable Inputs (Level 3)**

	<b>Warrant Derivative Liability</b>
Beginning balance at December 31, 2010	\$ —
Issuances	1,260,300
Adjustments to estimated fair value	6,569
Ending balance at December 31, 2011	\$ 1,266,869

<i>Revenue recognition</i>	<p>The Company's revenues are derived from the sale of bioprinter related products and services, NIH and U.S. Treasury Department Grants, collaboration agreements, and license agreements.</p> <p>The Company recognizes revenue when the following criteria have been met: (i) persuasive evidence of an arrangement exists; (ii) services have been rendered or product has been delivered; (iii) price to the customer is fixed and determinable; and (iv) collection of the underlying receivable is reasonably assured.</p> <p>Billings to customers or payments received from customers are included in deferred revenue on the balance sheet until all revenue recognition criteria are met. As of December 31, 2011 and 2010, the Company had approximately \$152,500 and \$107,000 in in deferred revenue related to its collaborative research programs.</p> <p><i>Product Revenue</i></p> <p>The Company recognizes product revenue at the time of shipment to the customer, provided all other revenue recognition criteria have been met. The Company recognizes product revenues upon shipment to distributors, provided that (i) the price is substantially fixed or determinable at the time of sale; (ii) the distributor's obligation to pay the Company is not contingent upon resale of the products; (iii) title and risk of loss passes to the distributor at time of shipment; (iv) the distributor has economic substance apart from that provided by the Company; (v) the Company has no significant obligation to the distributor to bring about resale of the products; and (vi) future returns can be reasonably estimated. For any sales that do not meet all of the above criteria, revenue is deferred until all such criteria have been met.</p> <p><i>Research and Development Revenue Under Collaborative Agreements.</i></p> <p>The Company's collaboration revenue consists of license and collaboration agreements that contain multiple elements, including non-refundable upfront fees, payments for reimbursement of third-party research costs, payments for ongoing research, payments associated with achieving specific development milestones and royalties based on specified percentages of net product sales, if any. The Company considers a variety of factors in determining the appropriate method of revenue recognition under these arrangements, such as whether the elements are separable, whether there are determinable fair values and whether there is a unique earnings process associated with each element of a contract.</p> <p>The Company recognizes revenue from research funding under collaboration agreements when earned on a "proportional performance" basis as research hours are incurred. The Company performs services as specified in each respective agreement on a best-efforts basis, and is reimbursed based on labor hours incurred on each contract. The Company initially defers revenue for any amounts billed or payments received in advance of the services being performed and recognizes revenue pursuant to the related pattern of performance, based on total labor hours incurred relative to total labor hours estimated under the contract.</p> <p>In December 2010, the Company entered into a 12 month research contract agreement with a third party, whereby the Company was engaged to perform research and development services on a fixed-fee basis for approximately \$600,000. Based on proportional performance criteria, the Company recognized approximately \$450,000 in revenue related to the contract during 2011, and expects to recognize the remaining \$150,000 in revenue during 2012.</p>
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In October 2011, the Company entered into a research contract agreement with a third party, whereby the Company will perform research and development services on a fixed-fee basis for \$1,365,000. The agreement includes an initial payment to the Company of approximately \$239,000, with remaining payments expected to occur over a 21-month period. At December 31, 2011, the Company recorded approximately \$239,000 in revenue related to the research contract in recognition of the proportional performance achieved by the Company during the fourth quarter of 2011.

*Revenue Arrangements with Multiple Deliverables*

The Company occasionally enters into revenue arrangements that contain multiple deliverables. Judgment is required to properly identify the accounting units of the multiple deliverable transactions and to determine the manner in which revenue should be allocated among the accounting units. Moreover, judgment is used in interpreting the commercial terms and determining when all criteria of revenue recognition have been met for each deliverable in order for revenue recognition to occur in the appropriate accounting period. For multiple deliverable agreements, consideration is allocated at the inception of the agreement to all deliverables based on their relative selling price. The relative selling price for each deliverable is determined using VSOE of selling price or third-party evidence of selling price if VSOE does not exist. If neither VSOE nor third-party evidence of selling price exists, the Company uses its best estimate of the selling price for the deliverable.

The Company recognizes revenue for delivered elements only when it determines there are no uncertainties regarding customer acceptance. While changes in the allocation of the arrangement consideration between the units of accounting will not affect the amount of total revenue recognized for a particular sales arrangement, any material changes in these allocations could impact the timing of revenue recognition, which could affect the Company's results of operations.

The Company expects to periodically receive license fees for non-exclusive research licensing associated with funded research projects. License fees under these arrangements are recognized over the term of the contract or development period as it has been determined that such licenses do not have stand-alone value.

*NIH and U.S. Treasury Grant Revenues*

During 2010, the U.S. Treasury awarded the Company two one-time grants totaling approximately \$397,300 for investments in qualifying therapeutic discovery projects under section 48D of the Internal Revenue Code. The grants cover reimbursement for qualifying expenses incurred by the Company in 2010 and 2009. The proceeds from these grants are classified in "Revenues – Grants" in the 2010 statement of operations.

During 2010 and 2009, the NHLBI, a division of the NIH, awarded the Company two research grants totaling approximately \$267,600. Revenues from the NIH grants are based upon internal and subcontractor costs incurred that are specifically covered by the grant, and where applicable, an additional facilities and administrative rate that provides funding for overhead expenses. These revenues are recognized when expenses have been incurred by subcontractors and as the Company incurs internal expenses that are related to the grant. Revenue recognized under these grants for the years ended December 31, 2011 and 2010 was approximately \$56,900 and \$131,100, respectively.

<i>Stock-based compensation</i>	<p>The Company accounts for stock-based compensation in accordance with Financial Accounting Standards Board's ASC Topic 718, <i>Compensation – Stock Compensation</i>, which establishes accounting for equity instruments exchanged for employee services. Under such provisions, stock-based compensation cost is measured at the grant date, based on the calculated fair value of the award, and is recognized as an expense, under the straight-line method, over the employee's requisite service period (generally the vesting period of the equity grant).</p> <p>The Company accounts for equity instruments, including restricted stock or stock options, issued to non-employees in accordance with authoritative guidance for equity based payments to non-employees. Stock options issued to non-employees are accounted for at their estimated fair value determined using the Black-Scholes option-pricing model. The fair value of options granted to non-employees is re-measured as they vest, and the resulting increase in value, if any, is recognized as expense during the period the related services are rendered. Restricted stock issued to non-employees is accounted for at their estimated fair value as they vest.</p>
<i>Research and development</i>	<p>Research and development expenses, including direct and allocated expenses, consist of independent research and development costs, as well as costs associated with sponsored research and development. Research and development costs are expensed as incurred.</p>
<i>Income taxes</i>	<p>Deferred income taxes are recognized for the tax consequences in future years for differences between the tax basis of assets and liabilities and their financial reporting amounts at each year end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. Income tax expense is the combination of the tax payable for the year and the change during the year in deferred tax assets and liabilities.</p>
<i>Comprehensive income (loss)</i>	<p>Comprehensive income (loss) is defined as the change in equity during a period from transactions and other events and circumstances from non-owner sources. The Company is required to record all components of comprehensive income (loss) in the financial statements in the period in which they are recognized. Net income (loss) and other comprehensive income (loss), including unrealized gains and losses on investments, are reported, net of their related tax effect, to arrive at Comprehensive income (loss). For the years ended December 31, 2011 and 2010, and for the period April 19, 2007 (inception) through December 31, 2011, the comprehensive loss was equal to the net loss.</p>
<i>New accounting standards</i>	<p>In May 2011, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2011-04, "<i>Fair Value Measurement</i>" to amend the accounting and disclosure requirements on fair value measurements. This ASU limits the highest-and-best-use measure to nonfinancial assets, permits certain financial assets and liabilities with offsetting positions in market or counterparty credit risks to be measured at a net basis, and provides guidance on the applicability of premiums and discounts. Additionally, this update expands the disclosure on Level 3 inputs by requiring quantitative disclosure of the unobservable inputs and assumptions, as well as description of the valuation processes and the sensitivity of the fair value to changes in unobservable inputs. ASU No. 2011-04 is to be applied prospectively and is effective during interim and annual periods beginning after December 15, 2011. The Company does not expect the adoption of this update to have a material effect on its financial statements.</p>

In June 2011, FASB issued ASU No. 2011-05, “Presentation of Comprehensive Income.” This ASU presents an entity with the option to present the total of comprehensive income, the components of net income, and the component of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. In both choices, an entity is required to present each component of other comprehensive income along with a total for other comprehensive income, and a total amount for comprehensive income. This update eliminates the option to present the components of other comprehensive income as part of the statement of changes in stockholders’ equity/deficit. The amendments in this update do not change the items that must be reported in other comprehensive income or when an item of other Comprehensive income must be reclassified to net income. ASU No. 2011-05 should be applied retrospectively and is effective for fiscal years, and interim periods within those years, beginning after December 15, 2011. As ASU No. 2011-05 relates only to the presentation of Comprehensive income, the Company does not expect the adoption of this update to have a material effect on its financial statements.

**2. Fixed Assets**

Fixed assets consisted of the following:

<u>December 31,</u>	<u>2011</u>	<u>2010</u>
Laboratory equipment	\$ 345,319	\$309,057
Leasehold improvements	34,198	34,198
Computer software and equipment	28,185	28,185
Furniture and fixtures	19,123	9,836
	<u>426,825</u>	<u>381,276</u>
Less accumulated depreciation and amortization	<u>(148,617)</u>	<u>(85,737)</u>
	<u>\$ 278,208</u>	<u>\$295,539</u>

Depreciation and amortization expense for the years ended December 31, 2011 and 2010 was approximately \$62,900 and \$57,100, respectively. Depreciation and amortization expense was approximately \$148,600 for the period from April 19, 2007 (inception) through December 31, 2011.

**3. Accrued Expenses**

Accrued expenses consisted of the following:

<u>December 31,</u>	<u>2011</u>	<u>2010</u>
Accrued compensation	\$317,097	\$129,234
Other accrued expenses	91,884	116,424
Deferred rent	28,856	59,922
	<u>\$437,837</u>	<u>\$305,580</u>

**4. Derivative Liability**

As discussed in Note 5, the Company issued Convertible Notes in 2011 that provided for the issuance of five-year warrants to purchase the Company’s Common stock. The exercise price of the warrants is protected against down-round financing throughout the term of the warrant under certain conditions.

The protective provisions will be triggered if, prior to the expiration date of the warrants, the Company issues additional shares of common stock without consideration or for a consideration per share less than the exercise price of the warrants in effect immediately prior to such issue. In the event such an issuance occurs, the exercise price of the warrants will be reduced to a price (calculated to the nearest cent) determined by multiplying the exercise price by a fraction, (A) the numerator of which is (1) the number of shares of common stock outstanding immediately prior to such issue plus (2) the number of shares of common stock which the aggregate consideration received or to be received by the Company for the total number of additional shares of common stock so issued would purchase at the exercise price; and (B) the denominator of which is the number of shares of common stock outstanding immediately prior to such issue plus the number of such additional shares of common stock so issued.

For purposes of this calculation, (i) all shares of common stock issuable upon conversion or exchange of convertible securities outstanding immediately prior to such issue shall be deemed to be outstanding, and (ii) the number of shares of common stock deemed issuable upon conversion or exchange of such outstanding convertible securities shall be determined without giving effect to any adjustments to the conversion or exchange price or conversion or exchange rate of such convertible securities resulting from the issuance of additional shares of common stock that is the subject of this calculation.

For purposes of the foregoing calculations, the term “additional shares of common stock” means all shares of common stock issued by the Company after the issuance of the warrants (including any shares of common stock issuable upon conversion or exchange of any convertible securities or upon exercise of any option or warrant, on an as-converted basis), other than: (i) shares of common stock (and/or warrants for any class of equity securities of the Company) issued or issuable upon conversion or exchange of any convertible securities or exercise of any options or warrants outstanding on the date of issuance of the warrants; (ii) shares of common stock issued or issuable by reason of a dividend, stock split, split-up or other distribution on shares of common stock, including such events pursuant to a reorganization, reclassification, consolidation, merger or sale; (iii) shares of common stock (or options with respect thereto) issued or issuable to employees or directors of, or consultants to, the Company or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Company; (iv) any securities issued or issuable by the Company pursuant to (A) the Securities Purchase Agreement pursuant to which the investors purchased the convertible promissory notes and the warrants, (B) the Selling Agreement with the Spencer Trask Ventures, Inc., the selling agent in the offering, (C) the reverse triangular merger of the Company into a publicly-held company, or (D) any private placement offering that closes (including subsequent closings) as part of the reverse triangular merger of the Company into a publicly-held company; and (v) securities issued pursuant to acquisitions or strategic transactions approved by a majority of disinterested directors of the Company, provided that any such issuance may only be to a person which is, itself or through its subsidiaries, an operating company in a business synergistic with the business of the Company and in which

the Company receives benefits in addition to the investment of funds, and may not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

Upon each adjustment of the exercise price pursuant to the provisions stated above, the number of shares issuable upon exercise of the warrants shall be adjusted by multiplying a number equal to the exercise price in effect immediately prior to such adjustment by the number of shares issuable upon exercise of the warrants immediately prior to such adjustment and dividing the product so obtained by the adjusted exercise price.

Pursuant to ASC 815-15 and ASC 815-40, the fair value of the warrants of \$1,260,300 was recorded as a derivative liability on the issuance date.

The fair value of the warrants was estimated at the issuance date and revalued at December 31, 2011, using a Monte Carlo simulation. At December 31, 2011, the Company has recorded a derivative liability of approximately \$1,266,900. The change in fair value of the derivative liability of approximately \$6,600 from the date of issuance to December 31, 2011 is included in other expense in the 2011 statement of operations.



**5. Convertible Notes Payable**

*Convertible notes* From February 9, 2008 through December 31, 2011 the Company raised an aggregate of \$2,390,000 in funds through loans consisting of convertible notes (“Convertible Notes”) to certain shareholders, management, vendors, and investors. The notes bore interest at rates ranging from 8% to 10% per annum and had maturity dates ranging from 2011 to 2018. The Convertible Notes were unsecured and subordinated to certain senior indebtedness of the Company, and for all Convertible Notes the principal plus accrued interest was convertible into the Company’s Common stock. During October 2011 the Convertible Notes and accrued interest converted into the Company’s Common stock, as discussed below.

*Local Bridge* During July and August 2011, \$740,000 of Convertible Notes bearing interest at 20% per annum, and warrants to purchase shares of common stock were issued to investors. The Convertible Notes were due at the earlier of 1) one year from the issuance date or 2) one week after the consummation of the Merger (as discussed in Note 12). The number of warrants to be issued was equal to the note principal divided by the exercise price. The exercise price is the per share or per unit fair market value received in the Merger. The notes were convertible at a price per share equal to seventy-five percent (75%) of the per share fair market value of the total consideration received for a share of a public company’s Common stock to be determined to be identified upon consummation of a merger.

The Company determined that the beneficial conversion feature and the warrants did not represent embedded derivative instruments. Additionally, the Company did not record the discount for the beneficial conversion feature due to the contingencies surrounding conversion. The beneficial conversion feature was to be recorded when the contingencies are resolved. In accordance with ASC 470-20, Debt with Conversion and Other Options, the Company recorded a discount of approximately \$583,700 for the warrants. The discount is being amortized to interest expense over the term of the Convertible Notes using the effective interest method.

The Company calculated the fair value of the warrants using the Black-Scholes Model using a volatility of 109.84%, an interest rate of 1.12% and a dividend yield of zero.

Certain of these Convertible Notes and accrued interest were converted into the Company’s Common stock in October 2011, as discussed below. Upon conversion the Company recognized the unamortized debt discount related to these notes to interest expense. The Company recognized approximately \$583,700 of interest expense for the amortization of the note discount during the year ended December 31, 2011.

*Exchange agreement and release* In October 2011, the Company’s Board of Directors and shareholders approved an Exchange Agreement and Release whereby the note holders could exchange their Convertible Notes and accrued interest for shares of the Company’s Common stock and warrants to purchase the Company’s Common stock. A total of \$3,030,000 of principal and approximately \$459,800 of accrued interest converted, at prices ranging from \$0.27 to \$0.75, into 7,676,828 shares of the Company’s Common stock, plus five-year warrants to purchase 1,309,750 Common shares at an exercise price of \$1.00 per share. The Company calculated the fair value of the warrants using the Black-Scholes Model using a volatility of 110.13%, an interest rate of 1.11% and a dividend yield of zero. For the holders that elected to participate, the Exchange Agreement and Release resulted in the cancellation of the Convertible Notes and release from the note holders for any claims related to the Convertible Notes.

The Company determined that the warrants issued in connection with the Exchange Agreement and Release did not represent embedded derivative instruments. The warrants, valued at approximately \$527,600, were classified as equity instruments and recorded as interest expense on the date of issuance.

*Private placement*

At December 31, 2011, a \$100,000 Convertible Note remained outstanding, and was paid in cash at the close of the Merger. See Note 12.

On September 18, 2011, the Company's Board of Directors authorized a private placement offering of up to 30 Units (the "Units") of its securities at a price of \$50,000 per Unit for an aggregate purchase price of \$1,500,000. Each Unit consists of a convertible note in the principal amount of \$50,000 accruing simple interest at the rate of 6% per annum, plus five-year warrants to purchase 50,000 shares of the next Qualified Round of Equity Securities, at an exercise price of \$1.00 per share. The principal plus accrued interest was convertible into the common stock of a public shell company to be identified upon consummation of a merger transaction.

During October and November 2011, \$1,500,000 of Convertible Notes bearing interest at 6% per annum with a maturity date of March 30, 2012, and five-year warrants to purchase 1,500,000 shares of the Company's Common stock were issued to investors under the private placement. The Convertible Notes were outstanding at December 31, 2011, and were converted into common stock in connection with the Merger. See Note 12. The warrants are exercisable at \$1.00 per share, expire in five years, and contain down-round price protection.

The Company determined that the warrants represent a derivative instrument due to the down-round price protection, and accordingly, the Company recorded a derivative liability related to the warrants of approximately \$1,260,300. See Note 4. Additionally, the Company recorded the discount for the beneficial conversion feature of \$239,700. The debt discount associated with the warrants and beneficial conversion feature are being amortized to interest expense over the life of the Convertible Notes. The Company recorded approximately \$603,800 of interest expense for the amortization of the debt discount during the year ended December 31, 2011.

As consideration for locating investors to participate in this financing, the placement agent earned a cash payment of \$195,000. Additionally, upon closing of a Merger transaction, the placement agent will earn five-year warrants to purchase 610,155 shares of the Company's Common stock at \$1.00 per share. These warrants contain down round protection and will be classified as derivative liabilities upon issuance.

As of December 31, 2011 and 2010, the outstanding principal balances on the Convertible Notes were \$1,600,000 and \$2,087,500, respectively. As of December 31, 2011 and 2010, the accrued interest balances on the outstanding Convertible Notes were approximately \$24,000 and \$252,000, respectively. As of December 31, 2011 and 2010, unamortized discounts relating to the outstanding principal balances were approximately \$896,200 and \$0, and the \$896,200 is expected to be recognized as interest expense in 2012.

Interest expense, including amortization of the note discounts, for the years ended December 31, 2011 and 2010 was approximately \$2,066,900 and \$161,000, respectively. Interest expense, including amortization of the note discounts, for the period from April 19, 2007 (inception) through December 31, 2011 was approximately \$2,318,000.

**6. Stockholders' Equity**

*Common stock*

In September 2011, the Company amended its Certificate of Incorporation to increase its authorized Common stock from 100,000 shares to 75,000,000 shares. Each share of the Company's Common stock is entitled to one vote and all shares rank equally as to voting and other matters.

On September 18, 2011, the Company approved a 362.282-for-1 forward stock split. The Company did not change the par value of the shares. The stockholders' equity section of the accompanying financial statements and all share numbers disclosed throughout the financial statements have been retroactively adjusted to give effect to the forward stock split.

The Company issued 1,729,532 shares of Common stock to the founders in February 2008.

In October 2011, the Company issued 7,676,828 shares of Common stock to note holders for the conversion of Convertible Notes with a principal balance totaling \$3,030,000 and accrued interest totaling approximately \$459,800. See Note 5.

*Restricted stock awards*

In February 2008, four founders, including the Chief Executive Officer ("CEO") and three directors of the Company received 11,779,960 shares of restricted Common stock, 25% vesting after the first year and the remaining 75% vesting in equal quarterly portions over the following three years.

On May 8, 2008, the Board of Directors of the Company approved the 2008 Equity Incentive Plan (the "2008 Plan"). The 2008 Plan authorized the issuance of up to 1,521,584 Common shares for awards of incentive stock options, non-statutory stock options, restricted stock awards, restricted stock unit awards, and stock appreciation rights. The 2008 Plan terminates on July 1, 2018.

From 2008 through 2011, the Company issued a total of 1,258,934 shares of restricted Common stock to various employees, advisors, and consultants of the Company. 1,086,662 of those shares were issued under the 2008 Plan and the remaining 172,272 shares were issued outside the plan.

A summary of the Company's restricted stock award activity is as follows:

	Number of Shares
Unvested at December 31, 2007	—
Granted	12,627,697
Vested	(65,211)
Canceled / forfeited	—
Unvested at December 31, 2008	12,562,486
Granted	130,422
Vested	(5,373,004)
Canceled / forfeited	—
Unvested at December 31, 2009	7,319,904
Granted	219,369
Vested	(3,256,191)
Canceled / forfeited	—
<b>Unvested at December 31, 2010</b>	<b>4,283,082</b>
<b>Granted</b>	<b>61,406</b>
<b>Vested</b>	<b>(3,233,193)</b>
<b>Canceled / forfeited</b>	<b>—</b>
<b>Unvested at December 31, 2011</b>	<b>1,111,295</b>

**Notes to Financial Statements**

The fair value of each restricted Common stock award is recognized as stock-based expense over the vesting term of the award. The Company recorded restricted stock-based compensation expense in operating expenses for employees and non-employees of approximately \$3,300 and \$3,900 for the years ended December 31, 2011 and 2010, respectively. The Company recorded stock-based compensation expense of approximately \$16,900 for the period from April 19, 2007 (inception) through December 31, 2011.

As of December 31, 2011 total unrecognized stock-based compensation expense was approximately \$1,800, which will be recognized over a weighted average period of less than one year.

*Stock options*

Under the 2008 Plan, on October 12, 2011 the Company granted an officer of the Company incentive stock options to purchase 896,256 shares of the Company's Common stock at an exercise price of \$0.08 per share, vesting over a four-year period commencing in May, 2011. After this grant, no additional issuances are authorized under the 2008 plan.

The following table summarizes stock option activity as of December 31, 2011, and the changes for the year then ended:

	<u>Options Outstanding</u>	<u>Weighted- Average Exercise Price</u>	<u>Aggregate Intrinsic Value</u>
Outstanding at December 31, 2010	—	—	—
Options Granted	896,256	\$ 0.08	—
Options Canceled	—	—	—
Options Exercised	—	—	—
Outstanding at December 31, 2011	<u>896,256</u>	\$ 0.08	\$ —
Vested and Exercisable at December 31, 2011	<u>—</u>	\$ 0.08	\$ —

The Company uses the Black-Scholes valuation model to calculate the fair value of stock options. The fair value of employee stock options was estimated at the grant date using the following assumptions:

	<u>December 31, 2011</u>
Weighted-average grant date fair value	\$ 0.06
Dividend yield	—
Volatility	111%
Risk-free interest rate	1.07%
Expected life of options	5.0 years

The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future. Due to the Company's limited historical data, the estimated volatility incorporates the historical and implied volatility of comparable companies whose share prices are publicly available. The risk-free interest rate assumption was based on the U.S. Treasury's rates for U.S. Treasury zero-coupon bonds with maturities similar to those of the expected term of the award being valued. The weighted average expected life of options was estimated using the average of the contractual term and the weighted average vesting term of the options.

The total employee stock-based compensation recorded as operating expenses was approximately \$5,800 for the year ended December 31, 2011 and for the period from April 19, 2007 (inception) through December 31, 2011.

The total unrecognized compensation cost related to unvested stock option grants as of December 31, 2011 was approximately \$48,000, and the weighted average period over which these grants are expected to vest is 4 years

*Warrants*

During 2011, the Company issued warrants to purchase 2,909,750 shares of its Common stock. These warrants are immediately exercisable at \$1.00 per share, and have remaining terms of approximately 4.8 years. None of the warrants were exercised as of December 31, 2011. See Notes 4 and 5.

*Common stock reserved for future issuance*

Common stock reserved for future issuance consisted of the following at December 31, 2011:

Common stock warrants outstanding	2,909,750
Common stock options outstanding under the 2008 Plan	896,256
Common stock warrants held for convertible debt issuance	1,500,000
Authorized for future grant or issuance under the 2008 Plan	—
<b>Total</b>	<b>5,306,606</b>

**7. Income Taxes**

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's net deferred tax assets are as follows as of December 31, 2011 and 2010:

<u>December 31,</u>	<u>2011</u>	<u>2010</u>
Deferred tax asset:		
Net operating loss carryforwards	\$ 1,620,000	\$ 784,000
Research & Development Credits	190,000	99,000
Depreciation and amortization	8,000	(2,000)
Accrued expenses and reserves	107,000	36,000
 Total deferred tax assets	 1,925,000	 917,000
Valuation Allowance	(1,925,000)	(917,000)
	<u>\$ —</u>	<u>\$ —</u>

A full valuation allowance has been established to offset the deferred tax assets as management cannot conclude that realization of such assets is more likely than not. The valuation allowance increased by approximately \$1,008,000 in 2011.

At December 31, 2011, the Company had federal and state net operating loss carryforwards of approximately \$4,067,000 and \$4,063,000, respectively. The federal and state net operating loss carryforwards will begin expiring in 2029, unless previously utilized.

At December 31, 2011, the Company had federal and state research tax credit carryforwards of approximately \$114,500 and \$114,800, respectively. The federal research tax credit carryforwards begin expiring in 2029. The state research tax credit carryforwards do not expire.

The Company applies the authoritative guidance for uncertainty in income taxes pursuant to ASC 740-10. The adoption of this guidance did not have a material impact on the Company's financial statements. The Company did not record any accruals for income tax accounting uncertainties for the years ended December 31, 2011 or 2010.

The Company's policy is to recognize interest and penalties that would be assessed in relation to the settlement value of unrecognized tax benefits as a component of income tax expense. The Company did not accrue either interest or penalties as of December 31, 2011 or 2010.

The Company is subject to taxation in the United States, and the state of California. As of December 31, 2011, the Company's tax years from inception are subject to examination by the tax authorities. The Company is not currently under examination by the United States federal or state jurisdictions.

## **8. Licensing Agreements and Research Contracts**

*University of Missouri* On March 24, 2009 the Company entered into a license agreement with the Curators of the University of Missouri to in-license certain technology and intellectual property relating to self-assembling cell aggregates and to intermediate cellular units. The Company received the exclusive worldwide rights to commercialize products comprising this technology for all fields of use. The Company paid to the University of Missouri a nonrefundable license fee of \$25,000 and has committed to reimburse the University of Missouri for certain prior and future patent costs. Each year the Company is required to pay the University of Missouri royalties ranging from 1% to 3% of net sales depending on the level of net sales achieved by the Company each year. A minimum annual royalty of \$25,000 is due beginning 2 years after the calendar year of the first commercial sale and is credited to sales royalties. The license agreement terminates upon expiration of the patents licensed and is subject to certain conditions as defined in the license agreement, which are expected to expire after 2029. The \$25,000 license fee is included in Other Assets in the accompanying balance sheets and is being amortized over the life of the related patent.

On March 12, 2010, the Company entered into a license agreement with the Curators of the University of Missouri to in-license certain technology and intellectual property relating to engineered biological nerve grafts. The Company received the exclusive worldwide rights to commercialize products comprising this technology for all fields of use. The Company paid to University of Missouri a nonrefundable license fee of \$5,000 and has committed to reimburse the University of Missouri for certain prior and future patent costs. In 2011 and 2010, the Company paid the University of Missouri \$23,789 and \$40,323, respectively, for prior patent costs relating to the license agreements with the University of Missouri. Each year the Company is required to pay the University of Missouri royalties ranging from 1% to 3% of net sales depending on the level of net sales achieved by the Company each year. A minimum annual royalty of \$5,000 is due beginning 2 years after the calendar year of the first commercial sale and is credited to sales royalties. An additional royalty of \$12,500 is due if there are no net sales within five years from the effective date of the license. The license agreement terminates upon expiration of the patents licensed and is subject to certain conditions as defined in the license agreement. The \$5,000 license fee is included in Other Assets and is being amortized over the life of the related patent.

On May 2, 2011, the Company entered into a license agreement with Clemson University Research Foundation to in-license certain technology and intellectual property relating to ink-jet printing of viable cells. The Company received the exclusive worldwide rights to commercialize products comprising this technology for all fields of use. The Company agreed to pay Clemson University a nonrefundable license fee of \$32,500, payable in four quarterly payments with the last payment due in April 2012. The Company has also committed to reimburse Clemson University for certain prior and future patent costs. In 2011 the Company paid Clemson University \$23,793 for prior patent costs. Each year the Company is required to pay the University royalties ranging from 1.5% to 3% of net sales depending on the level of net sales reached each year and minimum annual fees ranging from \$20,000 to \$40,000. Specific terms of the royalty and license agreements are confidential. The license agreement terminates upon expiration of the patents licensed, which is expected to expire in May 2024, and is subject to certain conditions as defined in the license agreement.

***Clemson University  
2011 licensing  
agreement***

On May 2, 2011 the Company entered into a license agreement with Clemson University Research Foundation to in-license certain technology and intellectual property relating to ink-jet printing of viable cells. The Company received the exclusive worldwide rights to commercialize products comprising this technology for all fields of use. The Company agreed to pay Clemson University a nonrefundable license fee in cash and in the form of a convertible promissory note. The Company has also committed to reimburse Clemson University for certain prior and future patent costs. Each year the Company is required to pay the University royalties. Specific terms of the royalty and license agreements are confidential. The license agreement terminates upon expiration of the patents licensed and is subject to certain conditions as defined in the license agreement.

No royalty fees have been incurred under the license agreements as of December 31, 2011.

Capitalized license fees consisted of the following:

<u>December 31,</u>	<u>2011</u>	<u>2010</u>
License fees	<b>\$95,000</b>	\$30,000
Less accumulated amortization	<b>(7,700)</b>	(2,500)
License fees, net	<b>\$87,300</b>	\$27,500

Amortization expense of licenses was approximately \$5,200, \$1,500 and 7,700 for 2011, 2010 and for the period from April 19, 2007 (inception) through December 31, 2011, respectively. At December 31, 2011, the weighted average remaining amortization period for all licenses was approximately 13 years. The annual amortization expense of licenses for the next five years is estimated to be approximately \$6,000 per year.

**9. Related Party  
Transactions*****Note payable - related  
party***

In October 2010, the CEO loaned the Company \$25,000 and was issued an interest-free note payable for the amount of the loan. At various points in 2011, the CEO made interest-free, short-term loans to the Company which in the aggregate totaled \$225,000. All the notes were repaid in full during 2011. Imputed interest on the loans was minimal.

There was approximately \$0 and \$94,400 in amounts due to the CEO recorded in accounts payable as of December 31, 2011 and 2010, respectively.

**10. Commitments and Contingencies***Operating leases*

The Company leases office and laboratory space under non-cancelable operating leases. The Company records rent expense on a straight-line basis over the life of the lease and records the excess of expense over the amounts paid as deferred rent.

Rent expense was approximately \$145,200 and \$107,500 for the years ended December 31, 2011 and 2010, respectively. Rent expense was approximately \$324,600 for the period from April 19, 2007 (inception) through December 31, 2011.

Future minimum rental payments required under operating leases that have initial or remaining non-cancelable lease terms in excess of one year are as follows:

<u>Year Ending December 31,</u>	
2012	\$ 125,095
Thereafter	—
Total	<u>\$ 125,095</u>

**11. Concentrations***Credit risk*

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of temporary cash investments. The Company maintains cash balances at various financial institutions primarily located in San Diego. Accounts at these institutions are secured by the Federal Deposit Insurance Corporation. At times, balances may exceed federally insured limits. The Company has not experienced losses in such accounts, and management believes that the Company is not exposed to any significant credit risk with respect to its cash and cash equivalents.

**12. Subsequent Events***Merger transaction*

On February 8, 2012, the Company merged with and into Organovo Acquisition Corp. (“Acquisition Corp.”), a wholly-owned subsidiary of Organovo Holdings, Inc., a publicly traded Delaware corporation (“Organovo Holdings”), with the Company surviving the merger as a wholly-owned subsidiary of Organovo Holdings (the “Merger”). As a result of the Merger, Organovo Holdings acquired the business of the Company, and will continue the existing business operations of the Company.

Simultaneously with the Merger, on February 8, 2012 (the “Closing Date”), all of the issued and outstanding shares of the Company’s common stock converted, on a 1 for 1 basis, into shares of Organovo Holding’s common stock, par value \$0.001 per share (“Common Stock”). Also on the Closing Date, all of the issued and outstanding options to purchase shares of the Company’s common stock and other outstanding warrants to purchase the Company’s common stock, and all of the issued and outstanding Bridge Warrants (as defined below) to purchase shares of the Company’s Common Stock, converted, respectively, into options (the “New Options”), warrants (the “New Warrants”) and new bridge warrants (the “New Bridge Warrants”) to purchase shares of Organovo Holding’s Common Stock. The New Bridge Warrants, the New Warrants and the New Bridge Options were converted on a 1 for 1 basis. The New Options will be administered under the Company’s 2008 Equity Incentive Plan (the “2008 Plan”), which Organovo Holding’s assumed and adopted on the Closing Date in connection with the Merger.

Specifically, on the Closing Date, (i) 22,445,254 shares of Common Stock were issued to the Company’s former stockholders; (ii) New Options to purchase 896,256 shares of Common Stock granted under the 2008 Plan were issued to the Company’s optionees pursuant to the assumption of the 2008 Plan by Organovo Holdings; (iii) New Warrants to purchase 1,309,750 shares of Organovo Holdings’ Common Stock at \$1.00 per share were issued to holders of the Company’s warrants; and (iv) New Bridge Warrants to purchase 1,500,000 shares of Organovo Holdings’ Common Stock at \$1.00 per share were issued to the Company’s Bridge Investors.

In connection with three separate closings of a private placement transaction completed in connection with the Merger (the “Offering”), the Company received gross proceeds of approximately \$6,500,000 (including \$1,500,000 previously received from the conversion of outstanding convertible notes payable), \$1,800,000 and \$6,900,000 on February 8, 2012, February 29, 2012 and March 16, 2012, respectively.

For all three closings of the Offering, the Company raised total gross proceeds of \$15,247,959 and total net proceeds of \$11,593,065.91 (or \$12,811,897.11, including the conversion of the Bridge Notes referred to above). The Company issued 15,247,987 shares of Organovo Holdings’ Common Stock and warrants to purchase 16,747,987 shares of Organovo Holdings’ Common Stock (including warrants to purchase 1,500,000 shares to former holders of the Bridge Notes) exercisable at \$1.00 to investors in the Offering. The placement agent and its selected dealers were paid total cash commissions of \$1,372,260 and the Placement Agent was paid an expense allowance of \$411,678 and was issued Placement Agent warrants to purchase 6,099,195 shares of Organovo Holdings’ Common Stock at an exercise price of \$1.00 per share (including warrants to purchase 610,155 shares issued in connection with issuance of the Bridge Notes and subsequently exchanged for new warrants in the Merger).

The Merger will be treated as a recapitalization of the Company for financial accounting.

On February 8, 2012, the Company merged with and into Organovo Acquisition Corp. (“Acquisition Corp.”), a wholly-owned subsidiary of Organovo Holdings, Inc., a publicly traded Delaware corporation (“Organovo Holdings”), with the Company surviving the merger as a wholly-owned subsidiary of Organovo Holdings (the “Merger”). As a result of the Merger, Organovo Holdings acquired the business of the Company, and will continue the existing business operations of the Company.



Simultaneously with the Merger, on February 8, 2012 (the “Closing Date”), all of the issued and outstanding shares of the Company’s common stock converted, on a 1 for 1 basis, into shares of Organovo Holding’s common stock, par value \$0.001 per share (“Common Stock”). Also on the Closing Date, all of the issued and outstanding options to purchase shares of the Company’s common stock and other outstanding warrants to purchase the Company’s common stock, and all of the issued and outstanding Bridge Warrants (as defined below) to purchase shares of the Company’s Common Stock, converted, respectively, into options (the “New Options”), warrants (the “New Warrants”) and new bridge warrants (the “New Bridge Warrants”) to purchase shares of Organovo Holding’s Common Stock. The New Bridge Warrants, the New Warrants and the New Bridge Options were converted on a 1 for 1 basis. The New Options will be administered under the Company’s 2008 Equity Incentive Plan (the “2008 Plan”), which Organovo Holding’s assumed and adopted on the Closing Date in connection with the Merger.

Specifically, on the Closing Date, (i) 22,445,254 shares of Common Stock were issued to the Company’s former stockholders; (ii) New Options to purchase 896,256 shares of Common Stock granted under the 2008 Plan were issued to the Company’s optionees pursuant to the assumption of the 2008 Plan by Organovo Holdings; (iii) New Warrants to purchase 1,309,750 shares of Organovo Holdings’ Common Stock at \$1.00 per share were issued to holders of the Company’s warrants; and (iv) New Bridge Warrants to purchase 1,500,000 shares of Organovo Holdings’ Common Stock at \$1.00 per share were issued to the Company’s Bridge Investors.

In connection with three separate closings of a private placement transaction completed in connection with the Merger (the “Offering”), the Company received gross proceeds of approximately \$6,500,000 (including \$1,500,000 previously received from the conversion of outstanding convertible notes payable), \$1,800,000 and \$6,900,000 on February 8, 2012, February 29, 2012 and March 16, 2012, respectively.

For all three closings of the Offering, the Company raised total gross proceeds of \$15,247,959 and total net proceeds of \$11,593,065.91 (or \$12,811,897.11, including the conversion of the Bridge Notes referred to above). The Company issued 15,247,987 shares of Organovo Holdings’ Common Stock and warrants to purchase 16,747,987 shares of Organovo Holdings’ Common Stock (including warrants to purchase 1,500,000 shares to former holders of the Bridge Notes) exercisable at \$1.00 to investors in the Offering. The placement agent and its selected dealers were paid total cash commissions of \$1,372,260 and the Placement Agent was paid an expense allowance of \$411,678 and was issued Placement Agent warrants to purchase 6,099,195 shares of Organovo Holdings’ Common Stock at an exercise price of \$1.00 per share (including warrants to purchase 610,155 shares issued in connection with issuance of the Bridge Notes and subsequently exchanged for new warrants in the Merger).

The Merger will be treated as a recapitalization of the Company for financial accounting purposes. The historical financial statements of Organovo Holdings before the Merger will be replaced with the historical financial statements of the Company before the Merger in all future filings with the Securities and Exchange Commission (the “SEC”).

Before the Merger, Organovo Holdings’ board of directors and stockholders adopted the 2012 Equity Incentive Plan (the “2012 Plan”). The 2012 Plan provides for the issuance of 6,553,9856 shares of Organovo Holdings’ Common Stock to executive officers, directors, advisory board members and employees. In addition, Organovo Holdings assumed and adopted the Company’s 2008 Plan, and as described above option holders under that plan were granted New Options to purchase Common Stock. No further options will be granted under the 2008 Plan. The parties have taken all actions necessary to ensure that the Merger is treated as a tax free exchange under Section 368(a) of the Internal Revenue Code of 1986, as amended.

*New facilities lease* The Company entered into a new facilities lease at 6275 Nancy Ridge Drive, San Diego, CA 92121. The lease was signed on February 27, 2012 with target occupancy of July 15, 2012. The base rent under the lease is approximately \$38,800 per month with 3% annual escalators. The lease term is 48 months with an option for the Company to extend the lease at the end of the lease term.

## UNAUDITED PRO FORMA COMBINED FINANCIAL STATEMENTS

Organovo Holdings, Inc. (f/k/a Real Estate Restoration & Rental, Inc.), a Delaware corporation (the “Parent”), Organovo Acquisition Corp., a Delaware corporation (the “Acquisition Subsidiary”) and Organovo, Inc., a Delaware corporation (the “Company”), are collectively referred to as the “Parties.”

The Parties entered into a merger agreement on February 8, 2012 that provides for a merger of the Acquisition Subsidiary with and into the Company, with the Company remaining as the surviving entity after the merger and operating a wholly-owned subsidiary of Parent (the “Merger”). In the Merger, the stockholders of the Company received common stock of the Parent in exchange for their capital stock of the Company.

Simultaneously with the closing of the Merger, the Parent completed a Private Placement (the “Private Placement”) of 5,000,500 units at the purchase price of \$1.00 per unit. Each unit consisted of one share of the Parent’s common stock, par value \$0.001 per share, and one five year warrant to purchase one share of Parent common stock at an exercise price of \$1.00 per share.

Also simultaneously with the closing of the Merger, the Company converted principal and interest of \$1,525,387 related to its bridge financing (the “Bridge Conversion”) into 1,525,387 shares of common stock, and issued five year warrants to purchase 1,525,387 shares of common stock at \$1.00 per share.

Immediately following the Merger, the Parent split-off its wholly owned subsidiary, Organovo Split Corp., a Delaware corporation (the “Split-Off Subsidiary”), through the sale of all of the outstanding capital stock of the Split-Off Subsidiary (the “Split-Off”) upon the terms and conditions of a split-off agreement.

The following unaudited pro forma combined balance sheet combines the historical balance sheet of the Parent as of December 31, 2011 and the historical balance sheet of the Company as of December 31, 2011, following the completion of the Merger, Private Placement, Bridge Conversion and Split-Off (collectively “the Transactions”). The Company remained as the surviving corporation of the Merger, becoming a wholly-owned subsidiary of the Parent. The pro forma combined balance sheet presented herein reflects the effects of the Transactions as if they had been consummated on December 31, 2011.

The following unaudited pro forma combined statements of operations combines the historical statements of operations of the Parent for the year ended December 31, 2011 and the Company for the year ended December 31, 2011, giving effect to the Transactions, as if they had occurred on January 1, 2011.

The following unaudited pro forma combined financial statements are presented to illustrate the estimated effects of the Transactions. The historical financial information has been adjusted to give effect to pro forma events that are directly attributable to the Transactions and factually supportable.

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The following information should be read in conjunction with the pro forma combined financial statements.

- Accompanying notes to the unaudited pro forma combined financial statements.
- Separate historical financial statements of the Parent for the year ended December 31, 2011 as filed in its Annual Report on Form 10-K with the Securities and Exchange Commission.
- Separate historical financial statements of the Company for the year ended December 31, 2011 included in this Current Report on Form 8-K/A.

The unaudited pro forma combined financial statements are presented for informational purposes only. The pro forma information is not necessarily indicative of what the financial position or results of operations actually would have been had the Transactions been completed at the dates indicated. In addition, the unaudited pro forma combined financial statements do not purport to project the future financial position or operating results of the combined company.

The unaudited pro forma combined financial statements were prepared using the reverse acquisition application of the acquisition method of accounting as described in ASC 805-40-05-2, with the Company treated as the acquirer for U.S. GAAP accounting and financial reporting purposes. Accordingly, the unaudited pro forma combined financial statements are presented as a continuation of the Company's financial statements with adjustments to reflect the Transactions.

**Organovo Holdings, Inc.**  
**Pro Forma Combined Balance Sheet at December 31, 2011**

	<u>Real Estate Restoration &amp; Rental, Inc.</u> <u>December 31, 2011</u>	<u>Organovo, Inc.</u> <u>December 31, 2011</u>	<u>Pro Forma Adjustments</u>	<u>Organovo Holdings, Inc.</u> <u>Pro Forma</u>
<b>Assets</b>				
<b>Current Assets</b>				
Cash and cash equivalents	\$ 753	\$ 339,607	\$ (104,219)	(1) \$ 4,585,823
			5,000,500	(3)
			(650,065)	(3)
			(753)	(4)
Inventory	—	291,881		291,881
Deferred financing costs	—	318,843	(248,857)	(2) 69,986
Prepaid expenses and other current assets	2,500	79,874	(2,500)	(4) 79,874
<b>Total current assets</b>	<u>3,253</u>	<u>1,030,205</u>	<u>3,994,106</u>	<u>5,027,564</u>
Fixed Assets - Net	—	278,208		278,208
Other Assets - Net	—	100,419		100,419
<b>Total assets</b>	<u>\$ 3,253</u>	<u>\$ 1,408,832</u>	<u>\$ 3,994,106</u>	<u>\$ 5,406,191</u>
<b>Liabilities and Stockholders' Equity (Deficit)</b>				
<b>Current Liabilities</b>				
Accounts payable	\$ 61,198	\$ 657,560	\$ (61,198)	(4) \$ 657,560
Accrued expenses	—	437,837		437,837
Deferred revenue	3,323	152,500	(3,323)	(4) 152,500
Accrued interest payable	—	24,018	796	(1) —
			(4,219)	(1)
			4,792	(2)
			(25,387)	(2)
Convertible notes payable, net	9,500	703,833	(100,000)	(1) —
			(1,500,000)	(2)
			896,167	(2)
			(9,500)	(4)
<b>Total current liabilities</b>	<u>74,021</u>	<u>1,975,748</u>	<u>(801,872)</u>	<u>1,247,897</u>
Derivative liabilities		1,266,869	52,876	(2) 1,573,169
			10,751	(2)
			242,673	(3)
<b>Total liabilities</b>	<u>74,021</u>	<u>3,242,617</u>	<u>(495,572)</u>	<u>2,821,066</u>
<b>Commitments and Contingencies</b>				
<b>Stockholders' Equity (Deficit)</b>				
Common stock, \$0.0001 par value; 75,000,000 shares authorized, 22,445,254 shares issued and outstanding prior to the merger; 28,971,141 shares issued and outstanding after the merger	680	2,245	152	(2) 2,897
			500	(3)
			(680)	(4)
Additional paid-in capital	181,245	4,855,526	1,525,235	(2) 10,477,272
			(10,751)	(2)
			5,000,000	(3)
			(650,065)	(3)
			(242,673)	(3)
			(181,245)	(4)
Deficit accumulated during the development stage	(252,693)	(6,691,556)	(796)	(1) (7,895,044)
			(4,792)	(2)
			(896,167)	(2)
			(248,857)	(2)
			(52,876)	(2)
			252,693	(4)
<b>Total stockholders' equity (deficit)</b>	<u>(70,768)</u>	<u>(1,833,785)</u>	<u>4,489,678</u>	<u>2,585,125</u>
<b>Total Liabilities and Stockholders' Equity (Deficit)</b>	<u>\$ 3,253</u>	<u>\$ 1,408,832</u>	<u>\$ 3,994,106</u>	<u>\$ 5,406,191</u>

*See notes to unaudited pro forma combined financial information.*

**Organovo Holdings, Inc.**  
**Pro Forma Combined Statement of Operations for the Year Ended December 31, 2011**

	Real Estate Restoration & Rental, Inc. 12 Months Ended December 31, 2011	Organovo, Inc. Year Ended December 31, 2011	Pro Forma Adjustments	Organovo Holdings, Inc. Pro Forma
<b>Revenues</b>				
Product	\$ 1,677	\$ 223,500	\$ (1,677)	\$ 223,500
Collaborations	—	688,088	—	688,088
Grants	—	56,925	—	56,925
<b>Total Revenues</b>	<u>1,677</u>	<u>968,513</u>	<u>(1,677)</u>	<u>745,013</u>
Costs of product revenue		133,607		
Professional fees	111,352	—	(111,352)	(4)
General and administrative expenses	21,824	1,705,171	(21,824)	(4)
Research and development expenses	—	1,419,718	—	1,419,718
Impairment of licensing rights	27,723	—	(27,723)	(4)
<b>Loss from Operations</b>	<u>(160,899)</u>	<u>(2,289,983)</u>	<u>160,899</u>	<u>(2,379,876)</u>
<b>Other Income (Expense)</b>				
Interest expense	—	(2,066,889)	2,066,889	(5)
Interest income	—	64	—	64
Miscellaneous income (expense)	—	(26,454)	—	(26,454)
<b>Total Other Income (Expense)</b>	<u>—</u>	<u>(2,093,279)</u>	<u>2,066,889</u>	<u>(26,390)</u>
<b>Net Loss</b>	<u>\$ (160,899)</u>	<u>\$ (4,383,262)</u>	<u>\$ 2,214,706</u>	<u>\$ (2,406,266)</u>
<b>Basic and Diluted Net Loss Per Common Share</b>	<u>\$ (0.02)</u>			<u>\$ (0.10)</u>
<b>Weighted Average Common Shares - Basic and Diluted</b>	<u>6,799,815</u>		<u>16,125,879</u>	<u>(6)</u>

*See notes to unaudited pro forma combined financial information.*

**NOTES TO UNAUDITED PRO FORMA  
COMBINED FINANCIAL STATEMENTS**

**1. Description of Transaction and Basis of Presentation**

Organovo Holdings, Inc. (f/k/a Real Estate Restoration & Rental, Inc.), a Delaware corporation (the “Parent”), Organovo Acquisition Corp., a Delaware corporation (the “Acquisition Subsidiary”) and Organovo, Inc., a Delaware corporation (the “Company”) are collectively referred to as the “Parties.”

The parties entered into a merger agreement on February 8, 2012 that provides for a merger of the Acquisition Subsidiary with and into the Company, with the Company remaining as the surviving entity after the merger and operating as a wholly-owned subsidiary of Parent (the “Merger”). In the Merger, the stockholders of the Company received common stock of the Parent in exchange for their capital stock of the Company. Simultaneously with the closing of the Merger, the Parent completed a Private Placement (the “Private Placement”) of 5,000,500 units at the purchase price of \$1.00 per unit. Each unit consisted of one share of the Parent’s common stock, par value \$0.001 per share and one five year warrant to purchase one share of Parent common stock at an exercise price of \$1.00 per share.

Also simultaneously with the closing of the Merger, the Company converted principal and interest of \$1,525,387 related to its bridge financing (the “Bridge Conversion”) into 1,525,387 shares of common stock, and issued five year warrants to purchase 1,525,387 shares of common stock at \$1.00 per share.

Immediately following the Merger, the Parent split-off its wholly owned subsidiary, Organovo Split Corp., a Delaware corporation (the “Split-Off Subsidiary”), through the sale of all of the outstanding capital stock of the Split-Off Subsidiary (the “Split-Off”) upon the terms and conditions of a split-off agreement.

The unaudited pro forma combined balance sheet combines the historical balance sheet of the Parent as of December 31, 2011 and the historical balance sheet of the Company as of December 31, 2011, following the completion of the Merger, Private Placement, Bridge Conversion and the Split-Off (collectively “the Transactions”). The Company remained as the surviving corporation of the Merger, becoming a wholly-owned subsidiary of the Parent. The pro forma combined balance sheet presented herein reflects the effects of the Transactions as if they had been consummated on December 31, 2011.

The unaudited pro forma combined statements of operations combines the historical statements of operations of the Parent for the year ended December 31, 2011 and the Company for year ended December 31, 2011, giving effect to the Transactions, as if they had occurred on January 1, 2011.

The unaudited pro forma combined financial statements are presented to illustrate the estimated effects of the Transactions. The historical financial information has been adjusted to give effect to pro forma events that are directly attributable to the Transactions and factually supportable.

## 2. Pro Forma Adjustments

There were no inter-company balances and transactions between the Parent and the Company as of the dates and for the periods of these pro forma condensed combined financial statements.

The pro forma adjustments included in the unaudited pro forma condensed combined financial statements are as follows:

- 1) To record payment of a \$100,000 convertible note and \$4,219 of accrued interest at the Merger date.
- 2) To record the conversion of \$1,500,000 in convertible notes payable and \$25,387 in accrued interest into 1,525,387 shares of common stock issued in the Private Placement; and to record the discount of \$896,167 as interest expense upon conversion; and to record interest expense of \$179,177 for amortization of the deferred bridge financing costs upon conversion; and to record a reduction of equity of \$139,667 to write-off merger related deferred financing costs; and to record interest expense of \$52,600 related to the value of the 1,525,387 warrants issued in the Private Placement in connection with the conversion of the convertible notes; and to record offering costs of \$21,040 related to the value of the 610,155 warrants issued to the placement agent.

The exercise price of the warrants is protected against down-round financing throughout the term of the warrant. Pursuant to ASC 815-15 and ASC 815-40, the fair value of the warrants was recorded as a derivative liability on the issuance date. The Company calculated the fair value of the warrants using the Black-Scholes Model using a volatility of 109.84%, an interest rate of 0.83% and a dividend yield of zero. The use of a binomial valuation model might result in a different valuation.

- 3) To record the issuance of 5,000,500 units in the Private Placement; and to record transaction expenses of \$650,065 payable to the placement agent; and to record a derivative liability of \$241,405 related to the value of the 5,000,500 warrants issued in the Private Placement and the 2,000,200 warrants issued to the placement agent.

The exercise price of the warrants is protected against down-round financing throughout the term of the warrant. Pursuant to ASC 815-15 and ASC 815-40, the fair value of the warrants was recorded as a derivative liability on the issuance date. The Company calculated the fair value of the warrants using the Black-Scholes



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Model using a volatility of 109.84%, an interest rate of 0.83% and a dividend yield of zero. The use of a binomial valuation model might result in a different valuation.

- 4) To record the effect of the Split-Off.
- 5) To reverse interest expense of \$2,066,889 related to convertible notes payable assumed to be converted as of January 1, 2011.
- 6) To reflect the shares issued in the Private Placement (5,000,500) and Bridge Conversion (1,525,387) as issued and outstanding as of January 1, 2011.

### **3. Pro Forma Net Loss Per Share**

The pro forma basic and diluted net loss per share are based on the number shares of common stock issued and outstanding of the Company after the Transactions, and assumes all common shares issued in the Transactions were issued and outstanding as of January 1, 2011.

**Organovo Holdings Inc.**  
**(A development stage company)**

**Balance Sheets**

	<u>March 31, 2012</u> (Unaudited)	<u>December 31, 2011</u> (Audited)
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 10,352,507	\$ 339,607
Inventory	337,396	291,881
Deferred financing costs	—	318,843
Prepaid expenses and other current assets	144,800	79,874
Total current assets	10,834,703	1,030,205
<b>Fixed Assets - Net</b>	268,886	278,208
<b>Restricted cash</b>	38,290	
<b>Other Assets</b>	98,671	100,419
Total assets	<u>\$ 11,240,550</u>	<u>\$ 1,408,832</u>
<b>Liabilities and Stockholders' Deficit</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 440,890	\$ 657,560
Accrued expenses	401,183	437,837
Deferred revenue	268,875	152,500
Accrued interest payable	—	24,018
Convertible notes payable, current portion	—	703,833
Total current liabilities	1,110,948	1,975,748
<b>Warrant Liabilities</b>	47,514,710	1,266,869
Total liabilities	\$ 48,625,658	\$ 3,242,617
<b>Commitments and contingencies (Note 5)</b>		
<b>Stockholders' Deficit</b>		
Common stock, \$0.001 par value; 75,000,000 shares authorized, 43,693,241 and 22,445,254 issued and outstanding at March 31, 2012 and December 31, 2011, respectively	43,693	22,445
Additional paid-in capital	6,343,337	4,835,326
Deficit accumulated during the development stage	(43,772,138)	(6,691,556)
Total stockholders' deficit	<u>(37,385,108)</u>	<u>(1,833,785)</u>
<b>Total Liabilities and Stockholders' Deficit</b>	<u>\$ 11,240,550</u>	<u>\$ 1,408,832</u>

The accompanying notes are an integral part of these condensed financial statements.

**Organovo Holdings, Inc.**  
**(A development stage company)**  
**Unaudited Statements of Operations**

	Three Months Ended March 31, 2012	Three Months Ended March 31, 2011	Period from April 19, 2007 (Inception) through March 31, 2012
<b>Revenues</b>			
Product	\$ —	\$ 100,000	\$ 223,500
Collaborations	120,000	73,865	883,088
Grants	—	26,924	664,112
<b>Total Revenues</b>	<b>120,000</b>	<b>200,789</b>	<b>1,770,700</b>
Cost of product revenue	—	50,584	133,607
Selling, general, and administrative expenses	901,843	243,494	3,567,881
Research and development expenses	547,287	398,664	3,745,675
<b>Loss from Operations</b>	<b>(1,329,130)</b>	<b>(491,953)</b>	<b>(5,676,463)</b>
<b>Other Income (Expense)</b>			
Fair value of warrant liabilities in excess of proceeds received	(19,019,422)	—	(19,019,422)
Change in fair value of warrant liabilities	(13,505,819)	—	(13,512,388)
Financing transaction costs in excess of proceeds received	(2,129,500)	—	(2,129,500)
Interest expense	(1,087,453)	(53,082)	(3,405,895)
Interest income	291	—	2,298
Other expense	(9,549)	(1,550)	(30,768)
<b>Total Other Income (Expense)</b>	<b>(35,751,452)</b>	<b>(54,632)</b>	<b>(38,095,675)</b>
<b>Net Loss</b>	<b>\$ (37,080,582)</b>	<b>\$ (546,585)</b>	<b>\$ (43,772,138)</b>
Net loss per common share - basic and diluted	\$ (1.17)	\$ (0.04)	
Weighted average shares used in computing net loss per common share - basic and diluted	31,591,663	14,881,058	

The accompanying notes are an integral part of these condensed financial statements.

**Organovo Holdings, Inc.**  
(A development stage company)

**Unaudited Statements of Stockholders' Deficit**  
Period from April 19, 2007 (Inception) through March 31, 2012

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total
	Shares	Amount			
<b>Balance at inception (April 19, 2007)</b>	—	\$ —	\$ —	\$ —	\$ —
Issuance of Common stock	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	—
Net Loss	—	—	—	—	—
<b>Balance at December 31, 2007</b>	—	\$ —	\$ —	\$ —	\$ —
Issuance of Common stock to founders	1,729,532	1,730	(1,730)	—	—
Issuance of restricted Common stock	12,627,697	12,628	(12,628)	—	—
Stock-based compensation expense	—	—	1,742	—	1,742
Net Loss	—	—	—	(97,559)	(97,559)
<b>Balance at December 31, 2008</b>	<b>14,357,229</b>	<b>\$14,358</b>	<b>\$ (12,616)</b>	<b>\$ (97,559)</b>	<b>\$ (95,817)</b>
Issuance of restricted Common stock	130,422	130	(130)	—	—
Stock-based compensation expense	—	—	2,336	—	2,336
Net Loss	—	—	—	(872,041)	(872,041)
<b>Balance at December 31, 2009</b>	<b>14,487,651</b>	<b>\$14,488</b>	<b>\$ (10,410)</b>	<b>\$ (969,600)</b>	<b>\$ (965,522)</b>
Issuance of restricted Common stock	219,369	219	(219)	—	—
Stock-based compensation expense	—	—	3,856	—	3,856
Net Loss	—	—	—	(1,338,694)	(1,338,694)
<b>Balance at December 31, 2010</b>	<b>14,707,020</b>	<b>\$14,707</b>	<b>\$ (6,773)</b>	<b>\$ (2,308,294)</b>	<b>\$ (2,300,360)</b>
Issuance of Common stock through conversion of notes payable	7,676,828	7,677	3,482,081	—	3,489,758
Issuance of restricted Common stock	61,406	61	(61)	—	—
Warrants issued with convertible notes and conversion of notes	—	—	1,111,364	—	1,111,364
Beneficial conversion feature of convertible notes payable	—	—	239,700	—	239,700
Stock-based compensation expense	—	—	9,015	—	9,015
Net Loss	—	—	—	(4,383,262)	(4,383,262)
<b>Balance at December 31, 2011</b>	<b>22,445,254</b>	<b>\$22,445</b>	<b>\$ 4,835,326</b>	<b>\$ (6,691,556)</b>	<b>\$ (1,833,785)</b>
Issuance of Common stock in connection with the merger	6,000,000	6,000	(6,000)	—	—
Issuance of Common stock through private placements in connection with the merger	13,722,600	13,723	13,708,877	—	13,722,600
Costs associated with the merger	—	—	(13,722,600)	—	(13,722,600)
Issuance of Common stock through conversion of notes payable and accrued interest in connection with the merger	1,525,387	1,525	1,523,862	—	1,525,387
Stock-based compensation expense	—	—	3,872	—	3,872
Net Loss	—	—	—	(37,080,582)	(37,080,582)
<b>Balance at March 31, 2012</b>	<b>43,693,241</b>	<b>\$43,693</b>	<b>\$ 6,343,337</b>	<b>\$(43,772,138)</b>	<b>\$(37,385,108)</b>

The accompanying notes are an integral part of these condensed financial statements.

**Organovo Holdings, Inc.**  
**(A development stage company)**  
**Unaudited Statements of Cash Flows**

	Three Months Ended March 31, 2012	Three Months Ended March 31, 2011	Period from April 19, 2007 (Inception) through March 31, 2012
<b>Cash Flows From Operating Activities</b>			
Net loss	\$ (37,080,582)	\$ (546,585)	\$(43,772,138)
Adjustments to reconcile net loss to net cash used in operating activities:			
Amortization of deferred financing costs	318,843	—	438,296
Depreciation and amortization	16,607	15,596	172,935
Amortization of debt discount	896,167	—	2,083,735
Interest accrued on convertible notes payable	11,616	53,082	495,392
Fair value of warrant liabilities in excess of proceeds	19,019,422	—	19,019,422
Change in fair value of warrant liabilities	13,505,819	—	13,512,388
Stock-based compensation	3,872	1,187	20,821
Warrants issued in connection with exchange agreement	—	—	527,629
Increase (decrease) in cash resulting from changes in:			
Accounts receivable	—	(199,213)	—
Grants receivable	—	59,744	—
Inventory	(45,515)	(10,634)	(337,396)
Prepaid expenses and other assets	(64,926)	(14,125)	(157,932)
Accounts payable	(216,670)	61,630	440,890
Accrued expenses	(36,654)	(872)	401,183
Deferred revenue	116,375	268,423	268,875
<b>Net cash used in operating activities</b>	<b>(3,555,626)</b>	<b>(311,767)</b>	<b>(6,885,900)</b>
<b>Cash Flows From Investing Activities</b>			
Restricted cash deposits	(38,290)	—	(38,290)
Purchases of fixed assets	(5,537)	—	(432,360)
Purchases of intangible assets	—	—	(95,000)
<b>Net cash used in investing activities</b>	<b>(43,827)</b>	<b>—</b>	<b>(565,650)</b>
<b>Cash Flows From Financing Activities</b>			
Proceeds from issuance of convertible notes payable	—	160,000	4,630,000
Proceeds from issuance of common stock and warrants	13,722,600	—	13,722,600
Proceeds from issuance of related party notes payable	—	—	250,000
Repayment of related party notes payable	—	(25,000)	(250,000)
Repayment of convertible notes and interest payable	(110,247)	—	(110,247)
Deferred financing costs	—	(901)	(438,296)
<b>Net cash provided by financing activities</b>	<b>13,612,353</b>	<b>134,099</b>	<b>17,804,057</b>
<b>Net Increase (Decrease) in Cash and Cash Equivalents</b>	<b>10,012,900</b>	<b>(177,668)</b>	<b>10,352,507</b>
<b>Cash and Cash Equivalents at Beginning of Period</b>	<b>339,607</b>	<b>285,308</b>	<b>—</b>
<b>Cash and Cash Equivalents at End of Period</b>	<b>\$ 10,352,507</b>	<b>\$ 107,640</b>	<b>\$ 10,352,507</b>
<b>Supplemental Disclosure of Cash Flow Information:</b>			
Interest	\$ 10,247	\$ —	10,247
Income Taxes	\$ 800	\$ 2,400	3,200

**Supplemental Disclosure of Noncash Investing and Financing Activities:**

During 2008, the Company issued 1,729,532 shares of Common stock to its founders.

During 2011 and 2010 and for the period from April 19, 2007 (Inception) through December 31, 2011, the Company issued 61,406, 219,369 and 13,038,894, respectively, shares of restricted Common stock to certain employees, advisors and consultants of the Company.

During 2011 and for the period from April 19, 2007 (Inception) through December 31, 2011, the Company issued certain convertible notes payable that included warrants. The warrants and the related beneficial conversion feature, valued at \$823,435 were classified as equity instruments and recorded as a discount to the carrying value of the related debt.

During 2011 and for the period from April 19, 2007 (Inception) through December 31, 2011, the Company issued warrants, valued at approximately \$1,260,300, in connection with certain convertible notes payable. The warrants were recorded as a warrant liability and recorded as a discount to the carrying value related to debt.

During 2011, the Company issued 7,676,828 shares of Common stock to note holders for the conversion of Convertible Notes with a principal balance totaling \$3,030,000 and accrued interest totaling \$459,758.

During 2012, the Company issued 1,525,387 shares of Common stock to note holders for the conversion of Convertible Notes with a principal balance totaling \$1,500,000 and accrued interest totaling \$25,387.

*The accompanying notes are an integral part of these condensed financial statements.*

**Organovo Holdings, Inc.**  
**(A development stage company)**

**Notes to Condensed Financial Statements**

**1. Summary of Significant Accounting Policies**

*Nature of operations  
and basis of  
presentation*

References in these notes to the unaudited condensed financial statements to “Organovo Holdings, Inc.,” “Organovo Holdings,” “we,” “us,” “our,” “the Company” and “our Company” refer to Organovo Holdings, Inc. and its consolidated subsidiary Organovo, Inc.

The Company has developed and is commercializing a platform technology for the generation of three-dimensional (3D) human tissues that can be employed in drug discovery and development, biological research, and as therapeutic implants for the treatment of damaged or degenerating tissues and organs.

As of March 31, 2012, the Company has devoted substantially all of its efforts to product development, raising capital, and building infrastructure. The Company has not realized significant revenues from its planned principal operations. Accordingly, the Company is considered to be in the development stage.

The accompanying interim condensed financial statements have been prepared by the Company, without audit, in accordance with the instructions to Form 10-Q and, therefore, do not necessarily include all information and footnotes necessary for a fair statement of its financial position, results of operations and cash flows in accordance with generally accepted accounting principles (“GAAP”). The balance sheet at December 31, 2011 is derived from the audited balance sheet at that date.

In the opinion of management, the unaudited financial information for the interim periods presented reflects all adjustments, which are only normal and recurring, necessary for a fair statement of financial position, results of operations and cash flows. These financial statements should be read in conjunction with the financial statements included in the Company’s Form 8-K/A for the fiscal year ended December 31, 2011 filed with the Securities and Exchange Commission (the “SEC”) on May 11, 2012. Operating results for interim periods are not necessarily indicative of operating results for the Company’s 2012 fiscal year.

*Merger transaction*

On February 8, 2012, Organovo, Inc., a privately held Delaware corporation, merged with and into Organovo Acquisition Corp., a wholly-owned subsidiary of the Company, a publicly traded Delaware corporation, with the Organovo, Inc. surviving the merger as a wholly-owned subsidiary of the Company (the “Merger”). As a result of the Merger, the Company acquired the business of the Organovo, Inc., and will continue the existing business operations of Organovo, Inc.

Simultaneously with the Merger, on February 8, 2012 (the “closing date”), all of the issued and outstanding shares of Organovo, Inc.’s common stock converted, on a 1 for 1 basis, into shares of the Company’s Common stock, par value \$0.001 per share. Also on the closing date, all of the issued and outstanding options to purchase shares of Organovo, Inc.’s common stock and other outstanding warrants to purchase Organovo, Inc.’s common stock, and all of the issued and outstanding bridge warrants to purchase shares of Organovo, Inc.’s common stock, converted, respectively, on a 1 for 1 basis, into options, warrants and new bridge warrants to purchase shares of the Company’s common stock.

Immediately following the consummation of the Merger: (i) the former security holders of Organovo, Inc. common stock had an approximate 75% voting interest in the Company and the Company stockholders retained an approximate 25% voting interest, (ii) former executive management team of Organovo, Inc. remained as the only continuing executive management team for the Company, and (iii) the Company’s ongoing operations consist solely of the ongoing operations of Organovo, Inc. Based primarily on these factors, the Merger was accounted for as a reverse merger and a recapitalization in accordance with GAAP. As a result, these financial statements reflect the historical results of Organovo, Inc. prior to the Merger, and the combined results of the Company following the Merger. The par value of Organovo, Inc. common stock immediately prior to the Merger was \$0.0001 per share. The par value subsequent to the Merger is \$0.001 per share, and therefore the historical results of Organovo, Inc. prior to the Merger have been retroactively adjusted to affect the change in par value.

In connection with three separate closings of a private placement transaction completed in connection with the Merger (the “Private Placement”), the Company received gross proceeds of approximately \$5,000,000, \$1,800,000 and \$6,900,000 on February 8, 2012, February 29, 2012 and March 16, 2012, respectively. The Company previously received \$1,500,000 from the purchase of 6% convertible notes which were automatically converted into 1,500,000 shares of common stock, plus 25,387 shares for accrued interest of \$25,387 on the principal, at February 8, 2012. See Note 3.

**Organovo Holdings, Inc.**  
**(A development stage company)**

**Notes to Condensed Financial Statements**

The cash transaction costs related to the Merger were approximately \$2,129,500.

Before the Merger, Organovo Holdings' board of directors and stockholders adopted the 2012 Equity Incentive Plan (the "2012 Plan"). The 2012 Plan provides for the issuance of 6,553,986 shares of the Company's Common stock to executive officers, directors, advisory board members and employees. In addition, Organovo Holdings assumed and adopted Organovo, Inc.'s 2008 Equity Incentive Plan.

*Liquidity*

As of March 31, 2012, the Company had an accumulated deficit of approximately \$43,772,000. The Company also had negative cash flow from operations of approximately \$3,556,000 during the three months ended March 31, 2012.

On February 8, 2012, the Company received gross proceeds of approximately \$5,000,000 in a private placement offering in conjunction with the Merger. On February 29, 2012 and March 16, 2012, the Company completed two additional closings of its Private Placement and received total gross proceeds of approximately \$8,722,000.

The Company expects to cover its anticipated operating expenses over the next twelve months through cash on hand including the funds raised during the first quarter of 2012 through the Private Placement of its securities and funds received through collaborative agreements, and other commercial arrangements.

The Company's ability to continue its operations is dependent upon its ability to raise additional capital through equity or debt financing, and to generate capital through collaborative research agreements and other commercial arrangements. There can be no assurance that any additional financing will be available on acceptable terms or available at all. Any equity financing may result in dilution to existing stockholders and any debt financing may include restrictive covenants.

The accompanying financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of these uncertainties.

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### **Organovo Holdings, Inc.** **(A development stage company)**

#### **Notes to Condensed Financial Statements**

<i>Use of estimates</i>	The preparation of the financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates. Significant estimates used in preparing the financial statements include those assumed in computing the valuation of warrants and conversion features, revenue recognized under the proportional performance model, the valuation of stock-based compensation expense, and the valuation allowance on deferred tax assets.
<i>Cash and cash equivalents</i>	The Company considers all highly liquid investments with original maturities of 90 days or less to be cash equivalents.
<i>Restricted cash</i>	As of March 31, 2012, the Company had \$38,290 of restricted cash deposited with a financial institution, held in certificates of deposit to support a letter of credit agreement related to the facility lease entered into during 2012.
<i>Inventory</i>	<p>Inventories are stated at the lower of the cost or market (first-in, first out). Inventory at March 31, 2012 consisted of approximately \$279,000 in finished goods and approximately \$58,000 in raw materials. Inventory at December 31, 2011 consisted of approximately \$235,000 in finished goods and approximately \$56,900 in raw materials.</p> <p>The Company provides inventory allowances based on excess or obsolete inventories determined based on anticipated use in the final product. There was no obsolete inventory reserve as of March 31, 2012 or December 31, 2011.</p>
<i>Deferred financing costs</i>	As of December 31, 2011, deferred financing costs consisted of approximately \$140,000 associated with the Merger transaction and approximately \$179,000 associated with convertible notes as part of the private placement offering that was initiated in the fourth quarter of 2011. The deferred financing costs related to the private placement offering were amortized over the life of the convertible notes and fully amortized to expense upon conversion of the convertible notes on February 8, 2012. The deferred financing costs associated with the Merger transaction in excess of the proceeds received were expensed at the effective Merger date. As of March 31, 2012, there were no deferred financing costs.
<i>Fixed assets and depreciation</i>	Property and equipment are carried at cost. Expenditures that extend the life of the asset are capitalized and depreciated. Depreciation and amortization are provided using the straight-line method over the estimated useful lives of the related assets or, in the case of leasehold improvements, over the lesser of the useful life of the related asset or the lease term. The estimated useful life of the fixed assets range between three and ten years.
<i>Impairment of long-lived assets</i>	In accordance with authoritative guidance the Company reviews its long-lived assets, including property and equipment and other assets, for impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be fully recoverable. To determine recoverability of its long-lived assets, the Company evaluates whether future undiscounted net cash flows will be less than the carrying amount of the assets and adjusts the carrying amount of its assets to fair value. Management has determined that no impairment of long-lived assets occurred in the period from inception through March 31, 2012.
<i>Fair value measurement</i>	Financial assets and liabilities are measured at fair value, which 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. The following is a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value:



[Table of Contents](#)**Organovo Holdings, Inc.**  
**(A development stage company)****Notes to Condensed Financial Statements**

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

As of March 31, 2012 and December 31, 2011, cash and cash equivalents were comprised of cash in checking accounts.

The Company used Level 3 inputs for its valuation methodology for the warrant derivative liabilities. The estimated fair values were determined using a Monte Carlo option pricing model based on various assumptions (see Note 2). The Company's derivative liabilities are adjusted to reflect estimated fair value at each period end, with any decrease or increase in the estimated fair value being recorded in other income or expense accordingly, as adjustments to fair value of derivative liabilities.

At March 31, 2012, the estimated fair values of the liabilities measured on a recurring basis are as follows:

**Fair Value Measurements at March 31, 2012**

	<u>Balance at March, 31, 2012</u>	<u>Quoted Prices in Active Markets (Level 1)</u>	<u>Significant Other Observable Inputs (Level 2)</u>	<u>Significant Other Unobservable Inputs (Level 3)</u>
Warrant liability	\$ 47,514,710	—	—	\$ 47,514,710

The following table presents the activity for liabilities measured at estimated fair value using unobservable inputs for the three months ended March 31, 2012:

**Fair Value Measurements Using Significant Unobservable Inputs (Level 3)**

	<u>Warrant Derivative Liability</u>
Beginning balance at December 31, 2011	\$ 1,266,869
Issuances	32,742,022
Adjustments to estimated fair value	13,505,819
Ending balance at March 31, 2012	\$ 47,514,710

**Organovo Holdings, Inc.**  
**(A development stage company)**

**Notes to Condensed Financial Statements**

*Revenue recognition*      *Research and Development Revenue Under Collaborative Agreements.*

In December 2010, the Company entered into a 12 month research contract agreement with a third party, whereby the Company was engaged to perform research and development services on a fixed-fee basis for approximately \$600,000. Based on the proportional performance criteria, the Company recognized approximately \$0 and \$74,000 in revenue related to the contract during three months ended March 31, 2012 and 2011, respectively. Total revenue recognized on the contract from inception through March 31, 2012 was approximately \$450,000.

In October 2011, the Company entered into a research contract agreement with a third party, whereby the Company will perform research and development services on a fixed-fee basis for \$1,365,000. The agreement included an initial payment to the Company of approximately \$239,000, with remaining payments expected to occur over a 21-month period. During the period ended March 31, 2012, the Company recorded approximately \$120,000 in revenue related to the research contract in recognition of the proportional performance achieved by the Company during the first quarter of 2012. Total revenue recognized on the contract from inception through March 31, 2012 was approximately \$359,000.

*NIH and U.S. Treasury Grant Revenues*

During 2010, the U.S. Treasury awarded the Company two one-time grants totaling approximately \$397,300 for investments in qualifying therapeutic discovery projects under section 48D of the Internal Revenue Code. The grants cover reimbursement for qualifying expenses incurred by the Company in 2010 and 2009. The proceeds from these grants are classified in "Revenues – Grants" for the period from inception through March 31, 2012.

During 2010 and 2009, the NHLBI, a division of the NIH, awarded the Company two research grants totaling approximately \$268,000. Revenues from the NIH grants are based upon internal and subcontractor costs incurred that are specifically covered by the grant, and where applicable, an additional facilities and administrative rate that provides funding for overhead expenses. These revenues are recognized when expenses have been incurred by subcontractors and as the Company incurs internal expenses that are related to the grant. Revenue recognized under these grants for the three months ended March 31, 2012 and 2011 was approximately \$0 and \$27,000, respectively. Total revenue recorded under these grants from inception through March 31, 2012 was approximately \$268,000.

Billings to customers or payments received from customers are included in deferred revenue on the balance sheet until all revenue recognition criteria are met. As of March 31, 2012 and December 31, 2011, the Company had approximately \$268,900 and \$152,500 in deferred revenue related to its collaborative research programs.

*Net loss per share*

Net loss per share is presented as both basic and diluted net loss per share. Basic net loss per share excludes any dilutive effects of options, shares subject to repurchase and warrants. Diluted net loss per share includes the impact of potentially dilutive securities. No dilutive effect was calculated for the three months ended March 31, 2012 and 2011 as the Company reported a net loss for each respective period and the effect would have been anti-dilutive. The Company had outstanding common share equivalents of 25,817,738 and 2,243,350 at March 31, 2012 and 2011, respectively.

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### Organovo Holdings, Inc. (A development stage company)

#### Notes to Condensed Financial Statements

##### 2. Derivative Liability

During 2012, in relation to the reverse Merger and the three offerings under the Private Placement, the Company issued 21,347,182 five-year warrants to purchase the Company's Common stock. The exercise price of the warrants is protected against down-round financing throughout the term of the warrant, as described below. The terms of the warrants issued in the first quarter of 2012 are the same as those issued in connection with the convertible notes in October and November 2011. Pursuant to ASC 815-15 and ASC 815-40, the fair value of the warrants of approximately \$32,742,000 was recorded as a derivative liability on the issuance dates.

As of December 31, 2011, the Company had a warrant liability of \$1,266,869 related to 1,500,000 warrants issued with Convertible Notes in the fourth quarter of 2011.

The Company revalued all of the warrants at the end of the period, and the estimated fair value of the warrant liabilities is \$47,514,710 at March 31, 2012. The change in fair value of the derivative liabilities of approximately \$13,505,800 is included in other expense in the 2012 statement of operations.

The derivative liabilities were valued at the closing dates of the Private Placement at March 31, 2012 using a Monte Carlo valuation model with the following assumptions:

	Closing dates	March 31, 2012
Closing price per share of common stock	\$ N/A	\$ 2.47
Exercise price per share	\$ 1.00	\$ 1.00
Expected volatility	105.8%-110.5%	103.5%
Risk-free interest rate	0.82%-1.07%	1.04%
Dividend yield	—	—
Remaining expected term of underlying securities (years)	5	4.90

In addition, as of the valuation dates, management assessed the probabilities of future financings assumptions in the Monte Carlo valuation models. Management also applied a discount for lack of marketability to the valuation of the derivative liabilities based on such trading restrictions due to the shares not being registered.

If, prior to the expiration date of the warrants, the Company issues additional shares of Common Stock, as defined below, without consideration or for a consideration per share less than the exercise price of the warrants in effect immediately prior to such issue, then the exercise price shall be reduced, concurrently with such issue, to a price (calculated to the nearest cent) determined by multiplying such exercise price by a fraction, (A) the numerator of which shall be (1) the number of shares of Common stock outstanding immediately prior to such issue plus (2) the number of shares of Common stock which the aggregate consideration received or to be received by the Company for the total number of additional shares of Common stock so issued would purchase at such exercise price; and (B) the denominator of which shall be the number of shares of Common stock outstanding immediately prior to such issue plus the number of such additional shares of Common stock so issued; provided that (i) all shares of Common stock issuable upon conversion or exchange of convertible securities outstanding immediately prior to such issue shall be deemed to be outstanding, and (ii) the number of shares of Common stock deemed issuable upon conversion or exchange of such outstanding convertible securities shall be determined without giving effect to any adjustments to the conversion or exchange price or conversion or exchange rate of such convertible securities resulting from the issuance of additional shares of Common stock that is the subject of this calculation. For purposes of the warrants, "additional shares of common stock" shall mean all shares of Common stock issued by the Company after the effective date (including without limitation any shares of Common stock issuable upon conversion or exchange of any convertible securities or upon exercise of any option or warrant, on an as-converted basis), other than: (i) shares of Common stock (and/or warrants for any class of equity securities of the Company) issued or issuable upon conversion or exchange of any convertible securities or exercise of any options or warrants outstanding on the effective date; (ii) shares of Common stock issued or issuable by reason of a dividend, stock split, split-up or other distribution on shares of Common stock; (iii) shares of Common stock (or options with respect thereto) issued or issuable to employees or directors of, or consultants to, the Company or any of its subsidiaries pursuant to a plan, agreement or arrangement approved by the Board of Directors of the Company; (iv) any securities issued or issuable by the Company pursuant to (A) the Private Placement; or (B) the Merger; (v) securities issued pursuant to acquisitions or strategic transactions approved by a majority of disinterested directors of the Company, provided that any such issuance shall only be to a person which is, itself or through its subsidiaries, an operating company in a business synergistic with the business of the Company and in which the Company receives benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities and (vi) securities issued to financial institutions, institutional investors or lessors in connection with credit arrangements, equipment financings or similar transactions approved by a majority of disinterested directors of the Company, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

Upon each adjustment of the exercise price pursuant to the provisions stated above, the number of warrant shares issuable upon exercise of the warrants shall be adjusted by multiplying a number equal to the exercise price in effect immediately prior to such adjustment by the number of warrant shares issuable upon exercise of the warrant immediately prior to such adjustment and dividing the product so obtained by the adjusted exercise price.

##### 3. Convertible Notes Payable

###### Convertible notes

At December 31, 2011, an unsecured \$100,000 Convertible Note, with interest at 10% and a maturity date of April 2014, remained outstanding. In February 2012, at the close of the Merger, the convertible note and accrued interest of approximately \$110,740 were repaid.



**Organovo Holdings, Inc.**  
**(A development stage company)**

**Notes to Condensed Financial Statements**

*Private placement* On September 18, 2011, Organovo, Inc.'s Board of Directors authorized a private placement offering of up to 30 units of its securities at a price of \$50,000 per unit for an aggregate purchase price of \$1,500,000. Each unit consisted of a convertible note in the principal amount of \$50,000 accruing simple interest at the rate of 6% per annum (the "Convertible Notes"), plus five-year warrants to purchase 50,000 shares of the next Qualified Round of Equity Securities, at an exercise price of \$1.00 per share. The principal plus accrued interest was convertible into the Company's common stock upon consummation of the Merger.

During October and November 2011, \$1,500,000 of Convertible Notes bearing interest at 6% per annum with a maturity date of March 30, 2012, and five-year warrants to purchase 1,500,000 shares of the Company's Common stock were issued to investors under the Private Placement. The warrants are exercisable at \$1.00 per share, expire in five years, and contain down-round price protection. The Convertible Notes were outstanding at December 31, 2011, and were converted into 1,525,387 units during February 2012, in connection with the Merger.

The Company determined that the warrants represent a derivative instrument due to the down-round price protection, and accordingly, the Company recorded a derivative liability related to the warrants. See Note 4. Additionally, during 2011 at issuance of the notes, the Company recorded the discount for the beneficial conversion feature of \$239,700. The debt discount associated with the warrants and beneficial conversion feature were amortized to interest expense over the life of the Convertible Notes, and fully amortized upon conversion of the Convertible Notes. The Company recorded approximately \$896,200 of interest expense for the amortization of the debt discount during the three months ended March 31, 2012 and approximately \$1,500,000 for the period from inception through March 31, 2012.

As consideration for locating investors to participate in the Private Placement, the placement agent earned a cash payment of \$195,000. Additionally, upon closing of the Merger transaction, the placement agent earned five-year warrants to purchase 610,155 shares of the Company's Common stock at \$1.00 per share. These warrants contain down round protection and were classified as derivative liabilities upon issuance. See Note 2.

Interest expense, including amortization of the note discounts, for the three months ended March 31, 2012 and 2011 was approximately \$1,087,453 and \$53,100, respectively. Interest expense, including amortization of the note discounts, for the period from April 19, 2007 (inception) through December 31, 2011 was approximately \$3,405,895.

During 2012, concurrently with the closing of the Merger and in contemplation of the Merger, the Company completed the initial closing of the Private Placement of up to 8,000,000 units of its securities, at a price of \$1.00 per unit, with the ability to increase the offering to an aggregate of up to 16,000,000 units. Each unit consisted of one share of Common Stock and a warrant to purchase one share of Common Stock. The Company completed three closings under the Private Placement during the three months ended March 31, 2012, and raised total gross proceeds of \$13,722,600 and total net proceeds of \$11,593,066. The Company issued 13,722,600 shares of its Common Stock and warrants to purchase 15,247,987 shares of its Common Stock (including warrants to purchase 1,525,387 shares to former holders of the bridge notes) exercisable at \$1.00 to investors in the Offering. The placement agent and its selected dealers were paid total cash commissions of \$1,372,260 and the Placement Agent was paid an expense allowance of \$411,678 and was issued Placement Agent warrants to purchase 6,099,195 shares of the Company's Common Stock at an exercise price of \$1.00 per share.

The warrants issued to the investors and the placement agent, as described above, contain down round protection, and accordingly, were classified as derivative liabilities upon issuance. On the closing date, the derivative liabilities were recorded at an estimated fair value of approximately \$32,742,000. Given that the fair value of the derivative liabilities exceeded the total proceeds of the private placement of \$13,722,600, no net amounts were allocated to the common stock. The amount by which the recorded liabilities exceeded the proceeds of approximately \$19,019,400 was charged to other expense at the closing dates. The Company has revalued the derivative liability as of March 31, 2012, and will continue to do so on each subsequent balance sheet date until the securities to which to derivative liabilities relate are exercised or expire, with any changes in the fair value. See Note 2.

*Registration rights agreement* The Company entered into a registration rights agreement (each, a "Registration Rights Agreement") with the investors in the Offering. Under the terms of the Registration Rights Agreement, the Company agreed to file a registration statement covering the resale of the Common Stock underlying the Units and the Common Stock that is issuable on exercise of the Investor Warrants (but not the Common Stock that is issuable upon exercise of the warrants issued as compensation to the placement agent in connection with the Offering) within 90 days from the final closing date of the Offering (the "Filing Deadline"), and shall use commercially reasonable efforts to cause the registration statement to become effective no later than 180 days after it is filed (the "Effectiveness Deadline").

The Company agreed to use reasonable efforts to maintain the effectiveness of the registration statement through the one year anniversary of the date the registration statement is declared effective by the Securities and Exchange Commission (the "SEC"), or until Rule 144 of the 1933 Act is available to investors in the Offering with respect to all of their shares, whichever is earlier. If the Company does not meet the Filing Deadline or Effectiveness Deadline, the Company will be liable for monetary penalties equal to one-half of one percent (0.5%) of each investor's investment in the offering at the end of every 30 day period following such Filing Deadline or Effectiveness Deadline failure until such failure is cured. The payment amount shall be prorated for partial 30 day periods. The maximum aggregate amount of payments to be made by the Company as the result of such shall be an amount equal to 6% of each investor's investment amount. Notwithstanding the foregoing, no payments shall be owed with respect to any period during which all of the investor's registrable securities may be sold by such investor under Rule 144 or pursuant to another exemption from registration.

[Table of Contents](#)**Organovo Holdings, Inc.**  
**(A development stage company)****Notes to Condensed Financial Statements****4. Stockholders' Equity**

*Common stock* During February and March 2012, the Company issued 21,247,987 shares of Common stock related to the Merger. See Notes 1 and 3.

*Restricted stock awards* In February 2008, four founders, including the Chief Executive Officer ("CEO") and three directors of Organovo, Inc. received 11,779,960 shares of restricted Common stock, 25% vesting after the first year and the remaining 75% vesting in equal quarterly portions over the following three years.

From 2008 through December 31, 2011, Organovo, Inc. issued a total of 1,258,934 shares of restricted Common stock to various employees, advisors, and consultants of Organovo, Inc. 1,086,662 of those shares were issued under the 2008 Equity Incentive Plan and the remaining 172,272 shares were issued outside the plan. No restricted stock was issued during the three months ended March 31, 2012.

A summary of the Company's restricted stock award activity is as follows:

	<u>Number of Shares</u>
Unvested at December 31, 2007	—
Granted	12,627,697
Vested	(65,211)
Canceled / forfeited	—
Unvested at December 31, 2008	12,562,486
Granted	130,422
Vested	(5,373,004)
Canceled / forfeited	—
Unvested at December 31, 2009	7,319,904
Granted	219,369
Vested	(3,256,191)
Canceled / forfeited	—
Unvested at December 31, 2010	4,283,082
Granted	61,406
Vested	(3,233,193)
Canceled / forfeited	—
Unvested at December 31, 2011	1,111,295
Granted	—
Vested	(446,745)
Canceled / forfeited	—
Unvested at March 31, 2012	<u>664,550</u>

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**Organovo Holdings, Inc.**  
**(A development stage company)**

**Notes to Condensed Financial Statements**

The fair value of each restricted Common stock award is recognized as stock-based expense over the vesting term of the award. The Company recorded restricted stock-based compensation expense in operating expenses for employees and non-employees of approximately \$430 and \$1,200 for the three months ended March 31, 2012 and 2011, respectively. The Company recorded stock-based compensation expense of approximately \$14,400 for the period from April 19, 2007 (inception) through March 31, 2012.

As of March 31, 2012, total unrecognized stock-based compensation expense was approximately \$1,370, which will be recognized over a weighted average period of less than one year.

*Stock options*

Under the 2008 Equity Incentive Plan, on October 12, 2011, Organovo, Inc. granted an officer incentive stock options to purchase 896,256 shares of Common stock at an exercise price of \$0.08 per share, a quarter of which will vest on the one year anniversary of employment, in May 2012, and the remaining options will vest ratably over the remaining 36 month term. No other options have been issued under the Plan and after the October 2011 grant, no additional issuances are authorized under the 2008 plan.

The following table summarizes stock option activity for the three months ended March 31, 2012:

	<u>Options Outstanding</u>	<u>Weighted- Average Exercise Price</u>
Outstanding at December 31, 2011	896,256	\$ 0.08
Options Granted	—	—
Options Canceled	—	—
Options Exercised	—	—
Outstanding at March 31, 2012	<u>896,256</u>	<u>\$ 0.08</u>
Vested and Exercisable at March 31, 2012	<u>—</u>	<u>\$ 0.08</u>

No stock options were granted during the three months ended March 31, 2012 and 2011.

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**Organovo Holdings, Inc.**  
**(A development stage company)**

**Notes to Condensed Financial Statements**

The total employee stock-based compensation recorded as operating expenses was approximately \$3,400 for the three months ended March 31, 2012 and \$6,400 for the period from April 19, 2007 (inception) through March 31, 2012.

The total unrecognized compensation cost related to unvested stock option grants as of March 31, 2012 was approximately \$44,600, and the weighted average period over which these grants are expected to vest is 3.2 years

*Warrants*

During 2011, Organovo, Inc. issued warrants to purchase 2,909,750 shares of its Common stock. These warrants are immediately exercisable at \$1.00 per share, and have remaining terms of approximately 4.8 years. None of the warrants were exercised as of December 31, 2011. See Notes 2 and 3.

During the three months ended March 31, 2012, the Company issued warrants to purchase 21,347,182 shares of its Common stock. These warrants are immediately exercisable at \$1.00 per share, and have remaining terms of approximately 4.8 years. None of the warrants were exercised as of March 31, 2012. See Note 2.

*Common stock reserved for future issuance*

Common stock reserved for future issuance consisted of the following at March 31, 2012:

Common stock warrants outstanding	24,256,932
Common stock options outstanding under the 2008 Plan	896,256
Common stock warrants held for convertible debt issuance	—
Total	<u>25,153,188</u>



**Organovo Holdings, Inc.**  
**(A development stage company)**

**Notes to Condensed Financial Statements**

**5. Commitments and Contingencies**

*Operating leases*

The Company leases office and laboratory space under non-cancelable operating leases. The Company records rent expense on a straight-line basis over the life of the lease and records the excess of expense over the amounts paid as deferred rent.

Rent expense was approximately \$60,200 and \$26,900 for the three months ended March 31, 2012 and 2011, respectively. Rent expense was approximately \$384,800 for the period from April 19, 2007 (inception) through March 31, 2012.

The Company entered into a new facilities lease at 6275 Nancy Ridge Drive, San Diego, CA 92121. The lease was signed on February 27, 2012 with target occupancy of July 15, 2012. The base rent under the lease is approximately \$38,800 per month with 3% annual escalators. The lease term is 48 months with an option for the Company to extend the lease at the end of the lease term.

Future minimum rental payments required under operating leases that have initial or remaining non-cancelable lease terms in excess of one year are as follows:

<u>Year Ending December 31,</u>	
2012	\$ 303,229
2013	466,170
2014	466,170
2015	466,170
2016	252,500
Total	<u>\$ 1,954,239</u>

**6. Concentrations**

*Credit risk*

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of temporary cash investments. The Company maintains cash balances at various financial institutions primarily located in San Diego. Accounts at these institutions are secured by the Federal Deposit Insurance Corporation. At times, balances may exceed federally insured limits. The Company has not experienced losses in such accounts, and management believes that the Company is not exposed to any significant credit risk with respect to its cash and cash equivalents.

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*You should read the following discussion and analysis in conjunction with our financial statements and related notes contained elsewhere in this prospectus. This discussion contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of a variety of factors, including those set forth under "Risk Factors" and elsewhere in this prospectus and those discussed in other documents we file with the SEC. In light of these risks, uncertainties and assumptions, readers are cautioned not to place undue reliance on such forward-looking statements. These forward-looking statements represent beliefs and assumptions only as of the date of this prospectus. Except as required by applicable law, we do not intend to update or revise forward-looking statements contained in this prospectus to reflect future events or circumstances.*

### Basis of Presentation

On February 8, 2012, Organovo, Inc., a privately held Delaware corporation, merged with and into Organovo Acquisition Corp., a wholly-owned subsidiary of Organovo Holdings, Inc., with Organovo, Inc. surviving the merger as a wholly-owned subsidiary of Organovo Holdings, Inc. (the "Merger"). In the Merger, Organovo Holdings, Inc. acquired the business of Organovo, Inc., and will continue the existing business operations of Organovo, Inc. As the result of the change in Organovo Holdings, Inc.'s business and operations from a shell company to a biotechnology company, a discussion of the past financial results of the shell company is not pertinent, and the financial results of Organovo, Inc., the accounting acquirer, are considered the Company's financial results on a historical and going-forward basis.

The discussion and analysis of our financial condition and results of operations are based on Organovo's financial statements, which we have prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues and expenses during the reporting periods. On an ongoing basis, we evaluate such estimates and judgments, including those described in greater detail below, on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions.

The condensed consolidated financial statements included for the quarterly periods ended March 31, 2012 and 2011 in this prospectus have been prepared in accordance with SEC instructions to Quarterly Reports on Form 10-Q. Accordingly, the condensed consolidated financial statements presented elsewhere in this prospectus for the quarterly periods ended March 31, 2012 and 2011 and discussed below are unaudited and do not contain all the information required by U.S. GAAP to be included in a full set of financial statements. In the opinion of management, all material adjustments necessary to present fairly the results of operations for the quarterly periods ended March 31, 2012 and 2011 have been included in this prospectus. All such adjustments are of a normal recurring nature. The results of operations for interim periods are not necessarily indicative of the results of operations for the entire year.

References in this section to "Organovo Holdings, Inc.," "Organovo Holdings," "we," "us," "our," "the Company" and "our Company" refer to Organovo Holdings, Inc. and its consolidated subsidiary Organovo, Inc.

### Overview

Organovo, Inc. was founded in Delaware in April 2007. Activities since Organovo, Inc.'s inception through 2011 were devoted primarily to developing a platform technology for the generation of three-dimensional (3D) human tissues that can be employed in drug discovery and development, biological research, and as therapeutic implants for the treatment of damaged or degenerating tissues and organs.

As of March 31, 2012, Organovo, Inc. had devoted substantially all of its efforts to product development, raising capital and building infrastructure. Organovo, Inc. did not, as of that date, realize significant revenues from its planned principal operations. Accordingly, Organovo, Inc. is considered to be in the development stage.

### Critical Accounting Policies

Our financial statements have been prepared in accordance with accounting principles generally accepted in the United States, which require that we make certain assumptions and estimates and, in connection therewith, adopt certain accounting policies. Our significant accounting policies are set forth in Note 1 to our financial statements. Of those policies, we believe that the policies discussed below may involve a higher degree of judgment and may be more critical to an accurate reflection of our financial condition and results of operations.

### Revenue Recognition

Our revenues are derived from the sale of bioprinter related products and services, NIH and U.S. Treasury Department Grants, collaboration agreements, and license agreements.

We recognize revenue when the following criteria have been met: (i) persuasive evidence of an arrangement exists; (ii) services have been rendered or product has been delivered; (iii) the price to the customer is fixed and determinable; and (iv) collection of the underlying receivable is reasonably assured.

Billings to customers or payments received from customers are included in deferred revenue on the balance sheet until all revenue recognition criteria are met. As of March 31, 2012 and December 31, 2011 and 2010, we had approximately \$268,875, \$152,500 and \$107,000, respectively in deferred revenue related to our collaborative research programs.

### Product Revenue

We recognize product revenue at the time of shipment to the customer, provided all other revenue recognition criteria have been met. We recognize product revenues upon shipment to distributors, provided that (i) the price is substantially fixed or determinable at the time of sale; (ii) the distributor's obligation to pay us is not contingent upon resale of the products; (iii) title and risk of loss passes to the distributor at time of shipment; (iv) the distributor has economic substance apart from that provided by us; (v) we have no significant obligation to the distributor to bring about resale of the products; and (vi) future returns can be reasonably estimated. For any sales that do not meet all of the above criteria, revenue is deferred until all such criteria have been met. Our collaboration revenue consists of license and collaboration agreements that contain multiple elements, including non-refundable upfront fees, payments for reimbursement of third-party research costs, payments for ongoing research, payments associated with achieving specific development milestones and royalties based on specified percentages of net product sales, if any. We consider a variety of factors in determining the appropriate method of revenue recognition under these arrangements, such as

whether the elements are separable, whether there are determinable fair values and whether there is a unique earnings process associated with each element of a contract.

*Collaborative and License Revenue*

We recognize revenue from research funding under collaboration agreements when earned on a “proportional performance” basis as research hours are incurred. We perform services as specified in each respective agreement on a best-efforts basis, and are reimbursed based on labor hours incurred on each contract. We initially defer revenue for any amounts billed, or payments received, in advance of the services being performed and recognize revenue pursuant to the related pattern of performance, based on total labor hours incurred relative to total labor hours estimated under the contract.

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In December 2010, we entered into a 12 month research contract agreement with a third party, whereby we were engaged to perform research and development services on a fixed-fee basis for approximately \$600,000. Based on proportional performance criteria, we recognized approximately \$450,000 in revenue related to the contract during 2011 and \$0 in revenue related to the contract during the first quarter of 2012.

In October 2011, we entered into a research contract agreement with a third party, whereby we will perform research and development services on a fixed-fee basis for \$1,365,000. The agreement included an initial payment of approximately \$239,000, with remaining payments expected to occur over a 21-month period. At March 31, 2012, we recorded approximately \$120,000 in revenue related to the research contract in recognition of the proportional performance achieved by us through the first quarter of 2012.

### *Revenue Arrangements with Multiple Deliverables*

We occasionally enter into revenue arrangements that contain multiple deliverables. Judgment is required to properly identify the accounting units of the multiple deliverable transactions and to determine the manner in which revenue should be allocated among the accounting units. Moreover, judgment is used in interpreting the commercial terms and determining when all criteria of revenue recognition have been met for each deliverable in order for revenue recognition to occur in the appropriate accounting period. For multiple deliverable agreements, consideration is allocated at the inception of the agreement to all deliverables based on their relative selling price. The relative selling price for each deliverable is determined using VSOE of selling price or third-party evidence of selling price if VSOE does not exist. If neither VSOE nor third-party evidence of selling price exists, we use our best estimate of the selling price for the deliverable.

We recognize revenue for delivered elements only when we determine there are no uncertainties regarding customer acceptance. While changes in the allocation of the arrangement consideration between the units of accounting will not affect the amount of total revenue recognized for a particular sales arrangement, any material changes in these allocations could impact the timing of revenue recognition, which could affect our results of operations.

### *NIH and U.S. Treasury Grant Revenues*

During 2010, the U.S. Treasury awarded us two one-time grants totaling approximately \$397,300 for investments in qualifying therapeutic discovery projects under section 48D of the Internal Revenue Code. The grants cover reimbursement for qualifying expenses incurred by us in 2010 and 2009. The proceeds from these grants are classified in "Revenues – Grants" in the 2010 statement of operations.

During 2010 and 2009, the NHLBI, a division of the NIH, awarded us two research grants totaling approximately \$267,600. Revenues from the NIH grants are based upon internal and subcontractor costs incurred that are specifically covered by the grant, and where applicable, an additional facilities and administrative rate that provides funding for overhead expenses. These revenues are recognized when expenses have been incurred by subcontractors and as we incur internal expenses that are related to the grant. Revenue recognized under these grants for the years ended December 31, 2011 and 2010 was approximately \$56,900 and \$131,100, respectively. Revenue recognized under these grants for the three months ended March 31, 2012 was approximately 0.

### *Allowance for Doubtful Accounts*

When needed we maintain an allowance for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. The allowance for doubtful accounts is reviewed quarterly and is estimated based on the aging of account balances, collection history and known trends with current customers and in the economy in general. As a result of this review, the allowance is adjusted on a specific identification basis. An increase to the allowance for doubtful accounts results in a corresponding charge to sales, marketing and administrative expense. Historically our customer base is relatively concentrated and so we are subject to risk of concentration with any one particular customer. That risk is mitigated by the fact that payments from our collaborative agreements are typically prepaid, and our grant revenues are typically paid by units of the U.S. government. To-date we have fully collected all receivables. As a result our current and historic allowance is zero.

When we begin to sell commercial product we expect to establish a reserve for estimated sales returns that are recorded as a reduction to revenue. That reserve will be maintained to account for future return of products sold in the current period. The reserve will be reviewed quarterly and will be estimated based on an analysis of our historical experience related to product returns.

### *Derivative Financial Instruments*

We do not use derivative instruments to hedge exposures to cash flow, market or foreign currency risks.

We review the terms of convertible debt and equity instruments we issue to determine whether there are embedded derivative instruments, including an embedded conversion option that is required to be bifurcated and accounted for separately as a derivative financial instrument. In circumstances where the convertible instrument contains more than one embedded derivative instrument, including the conversion option, that is required to be bifurcated, the bifurcated derivative instruments are accounted for as a single, compound derivative instrument. Also, in connection with the sale of convertible debt and equity instruments, we may issue freestanding warrants that may, depending on their terms, be accounted for as derivative instrument liabilities, rather than as equity.

Derivative instruments are initially recorded at fair value and are then revalued at each reporting date with changes in the fair value reported as non-operating income or expense. When the convertible debt or equity instruments contain embedded derivative instruments that are to be bifurcated and accounted for as liabilities, the total proceeds allocated to the convertible host instruments are first allocated to the fair value of all the bifurcated derivative instruments. The remaining proceeds, if any, are then allocated to the convertible instruments themselves, usually resulting in those instruments being recorded at a discount from their face value.

### *Fair Value Measurements*

Financial assets and liabilities are measured at fair value, which 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. The following is a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

We used Level 3 inputs for our valuation methodology for the warrant derivative liabilities. The estimated fair values were determined using a Monte Carlo option pricing model based on various assumptions (see Note 4 to the Financial Statements of Organovo, Inc. for the year ended December 31, 2011). Our derivative liabilities are adjusted to reflect estimated fair value at each period end, with any decrease or increase in the estimated fair value being recorded in other income or expense accordingly, as adjustments to fair value of derivative liabilities.

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### **Stock-Based Compensation**

For purposes of calculating stock-based compensation, we estimate the fair value of stock options using a Black-Scholes option-pricing model. The determination of the fair value of share-based payment awards utilizing the Black-Scholes model is affected by our stock price and a number of assumptions, including expected volatility, expected life, risk-free interest rate and expected dividends. The expected volatility is based on the historical volatility of our common stock over the most recent period commensurate with the estimated expected term of the stock options. The expected life of the stock options is based on historical and other economic data trended into the future. The risk-free interest rate assumption is based on observed interest rates appropriate for the expected terms of our stock options. The dividend yield assumption is based on our history and expectation of no dividend payouts. If factors change and we employ different assumptions, stock-based compensation expense may differ significantly from what we have recorded in the past. If there is a difference between the assumptions used in determining stock-based compensation expense and the actual factors which become known over time, specifically with respect to anticipated forfeitures, we may change the input factors used in determining stock-based compensation costs for future grants. These changes, if any, may materially impact our results of operations in the period such changes are made.

### **Results of Operations**

#### **Overview**

##### ***Comparison of the three months ended March 31, 2012 and 2011***

#### *Revenues*

First quarter 2012 total revenues of \$120,000 were \$80,789, or 40%, below first quarter 2011 revenues of \$200,789. Collaborative research revenues of \$120,000 increased \$46,135, or 62%, over the same period of prior year of \$73,865. That growth was more than offset by no grant or product revenues in the first quarter of 2012, versus prior year, same period grant revenues of \$26,924, and product revenues of \$100,000. Revenue is expected to fluctuate between periods as the Company is in the development stage.

#### *Operating Expenses*

*Overview.* Operating expenses increased approximately \$806,972, or 126%, in the first quarter of 2012 over the same period in 2011, from \$642,158 in 2011 to \$1,449,130 in 2012. Most significantly, relative to the same period in the prior year, the Company invested in infrastructure and outside services to support its transition from private ownership to a publicly owned and traded corporation. As expected in such transition, incremental initiatives were established in investor outreach, corporate governance, and SEC financial reporting including the need for audited financial statements. Non-payroll, non-audit related incremental public company expenses incurred in the first quarter of 2012 over the same period in 2011, were approximately \$275,000, or approximately 34% of total incremental spending. Fees paid to our independent accounting firm to audit our financial statements were \$139,000 in the first three months of 2012, representing approximately 17% of incremental spending over the first quarter 2011. Moreover, the Company invested in building its executive, research, and development staff, increasing first quarter 2012 payroll related expenses by \$145,528, or 58%, over the same period 2011, from \$250,399 to \$395,927. Payroll related expenses accounted for approximately 18% of total year-to-year increase in operating expenses. The remaining incremental spending, period to period, were from numerous sources less significant than the foregoing. Executive search fees totaled \$83,000, legal expenses related to licensing activity increased \$43,000, newly established fees paid to our non-employee board members were approximately \$35,000, and additional space was rented to accommodate our growing administrative and research staff at an incremental cost of \$33,000 over the first quarter 2011.

*Research and Development Expenses.* First quarter 2012 research and development expenses increased by \$148,623, or 37%, over the first quarter 2011 expenses of \$398,664 to \$547,287 as the Company increased its research staff to accommodate obligations under certain collaborative research agreements and to expand product development efforts in preparation for research-derived revenues. Full-time research and development staffing increased from four scientists, engineers and research associates at the three months ended March 31, 2011 to eleven in the same period 2012. Those staff additions yielded decreased consulting expenses by approximately \$35,000 from the first quarter 2011 consulting expenses of \$64,712. Those savings were offset by the Company incurring \$61,457 in incremental executive search expenses during the first quarter 2012. In addition, laboratory supplies expenses increased from approximately \$32,000 in the first quarter of 2011 to approximately \$95,000 in the same period 2012, an increase of \$63,000. That increase was related to purchases in support of our collaborative research conducted under our agreements.

*General and Administrative Expenses.* First quarter 2012 general and administrative expenses of \$901,843 increased \$658,349, or 270%, over same period 2011 expenses of \$243,494. Expense increases were primarily driven by the Company's transition from operating in a private environment to operating in a publicly traded environment. Expanded staff increased payroll and facilities expenses in 2012 over 2011 levels. Payroll related expenses increased from \$76,917 in the first quarter 2011 to \$236,266 for the same period 2012, an increase of \$159,349 or 207%. The increase was primarily due to the addition of accounting staff to meet the expanded needs of operating in a publicly traded environment. In addition, the Board of Directors increased the base salary of our Chief Executive Officer from \$220,000 per annum to \$302,500. At March 31, 2011 the base salary of our CEO was \$110,000. The 2012 adjustment, while large relative to the first quarter 2011 base rate, is in the lowest quartile of base salaries of peer companies as measured by an independent compensation expert retained by the board to access executive compensation. First quarter 2012 audit related expenses were approximately \$139,000, whereas there were no audit related expenses during the same period 2011. Approximately \$275,000 in other public company expenses were incurred in the first quarter of 2012 due to multiple reasons including increases to investor relations spending, financial printing, fees for non-employee Board members, rent and utilities, legal expenses, information technology investments in hardware, software and consulting services, and travel.

*Other Income (Expense).* The \$35,696,820 increase in other expenses for the three month period ending March 31, 2012 over the same period of the prior year, was essentially due to the non-cash transaction costs associated with the first quarter 2012 Private Placement. During the first quarter of 2012 we incurred costs due to the placement agent for the first quarter Private Placement fees of \$1,617,629 and reimbursed expenses and legal fees of \$166,310. In addition, we issued warrants to purchase 6,099,195 shares of our common stock to the placement agent and warrants to purchase 15,247,987 of our common stock to investors in the Private Placement. The warrants issued to the placement agent and Private Placement investors were determined to be derivative liabilities as a result of the anti-dilution provisions in the warrant agreements that may result in an adjustment to the warrant exercise price. We will revalue the derivative liability on each subsequent balance sheet date until the securities to which the derivatives liabilities relate are exercised or expire. The fair value of warrant liabilities in excess of proceeds received was \$19,019,422, while the change in fair value of warrant liabilities was \$13,505,819. Financing transaction costs in excess of proceeds received was \$2,129,500, and our interest expense was \$1,087,453. The first quarter 2012 interest expense was primarily related to non-cash components including accretion of debt discounts and amortization of deferred financing costs.

Various factors are considered in the pricing models we use to value the warrants, including the company's current stock price, the remaining life of the warrants, the volatility of the company's stock price, and the risk free interest rate. Future changes in these factors will have a significant impact on the computed fair value of the warrant liability. As such, we expect future changes in the fair value of the warrants to continue to vary significantly from quarter to quarter.

**Comparison of the twelve months ended December 31, 2011 and 2010**

*Revenues*

2011 total revenues of \$968,513 increased \$365,101, or 61%, over 2010 revenues of \$603,412. That increase was due to a \$613,088 increase in collaborative agreement revenues, and a \$223,500 increase in product revenues, partially offset by a \$471,487 reduction in grant revenues. While grant revenues are expected to continue through 2012 they are expected to represent a declining portion of total revenues as we focus efforts on collaborative agreements and continued development of research tools.

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### *Cost of Goods Sold, Gross Profit and Gross Profit Margin*

Cost of goods sold (“COGS”) consists of purchased goods, and inventory-related costs. The Company did not have product revenues in 2010 and consequently did not have COGS. 2011 COGS of \$133,607 were approximately 60% of product related revenues and 14% of total revenues.

### *Operating Expenses*

*Overview.* Operating expenses increased approximately \$1,343,259, or 75%, in 2011 over 2010, from \$1,781,630 in 2010 to \$3,124,889 in 2011. Most significantly, the Company invested in building its executive, research, and development staff, increasing payroll related expenses by \$736,239 or 102% over 2010, from \$720,759 to \$1,456,998. Payroll related expenses accounted for approximately 55% of total year-to-year increase in operating expenses. General corporate expenses grew from \$131,362 in 2010 to \$421,063 in 2011, an increase of \$289,700, or 221%, representing 22% of total operating expense growth. 85% of that expense increase was the result of increased legal activity, primarily focused on intellectual property (patent) protection. In addition, the Company utilized the services of outside consultants and research services to meet short-term spikes in scientific and professional service demands. Outsourcing those services to meet short-term demands increased Company expenses by \$261,213, from \$540,458 in 2010 to \$801,671 in 2011, accounting for 19% of the total operating expense increases. The Company did not engage an independent accounting firm in 2010 but did so in 2011 to audit the 2009 and 2010 financials. As a result overall operating expenses increased by \$24,688 in 2011 over the prior year.

*Research and Development Expenses.* 2011 research and development expenses increased by \$216,002, or 18%, over 2010 expenses of \$1,203,716 as the Company increased its research staff to accommodate its obligations under certain collaborative research agreements and to expand product development efforts in preparation for research-derived revenues. Full-time research and development staffing increased from four scientists and engineers at the 12 months ended December 31, 2010 to seven in 2011. In addition, the Company outsourced certain research related activities in response to short-term demand spikes that increased expenses nearly \$90,000 over prior year.

*Selling, General and Administrative Expenses.* Selling, general and administrative expenses grew from \$577,914 in 2010 to \$1,705,171 in 2011, an increase of \$1,127,257 or 195%. Most notably the Company invested in its general and administrative staff, building needed infrastructure to meet the needs of operating in a publicly traded environment. Salaries, fringes and payroll related expenses increased by approximately \$686,000, or 61% of the total increase. Legal expenses increased \$244,861 from \$114,099 in 2010 to \$358,960 in 2011. 78% of the legal expense increases were related to our patent related legal activities as we work diligently to secure additional patent protection in select markets. In 2011 we secured a short-term lease on office space near our main facility to accommodate our staff increases and need for additional meeting space. Rent expense grew from \$107,481 in 2010 to \$145,218 for the year ended December 31, 2011, an increase of approximately \$38,000. During 2011 we engaged an independent accounting firm to audit our 2009 and 2010 financial statements, adding approximately \$25,000 in administrative expense that was not incurred in the prior year.

*Interest Expense.* Interest expense increased by \$1,906,016 from \$160,873 in 2010 to \$2,066,889 in 2011. The 2011 interest expense was primarily related to non-cash components including:

- 1) Accretion of debt discounts to interest expense of approximately \$1.2 million
- 2) Amortization of deferred financing costs of approximately \$119,500
- 3) Fair value of warrants issued in connection with the exchange agreement of approximately \$527.6K

In the fourth quarter of 2011, the Company exchanged all outstanding convertible promissory notes for common stock equity, except for one \$100,000 note, the principal and accrued but unpaid interest thereon to be paid at the close of a qualified equity financing. Following the exchange of earlier notes for equity, the Company completed a Bridge Financing, in which it sold \$1,500,000 in principal amount of 6% promissory notes due March 31, 2012. Those notes will automatically convert to equity, including accrued but unpaid interest, upon the first close of a qualified equity financing.

### **Financial Condition, Liquidity and Capital Resources**

Since our inception, we have primarily devoted our efforts to research and development, business planning, raising capital, recruiting management and technical staff, and acquiring operating assets. Accordingly, we are considered to be in the development stage.

Since inception, we incurred negative cash flows from operations. As of March 31, 2011, we had cash and cash equivalents of \$339,607 and an accumulated deficit of \$1,833,785. We also had negative cash flow from operations of \$311,767 during the quarter ended March 31, 2011. At March 31, 2012, we had cash of \$10,352,507 and an accumulated deficit of \$37,385,108.

At March 31, 2012, we had total current assets of \$10,834,703 and current liabilities of \$1,110,948, resulting in working capital of \$9,723,755. At March 31, 2011, we had total current assets of \$1,030,205 and current liabilities of \$1,975,748, resulting in a working capital deficit of \$945,543.

Net cash used by operating activities for the quarter ended March 31, 2012 was \$3,555,626. We raised approximately \$13.7 million in gross proceeds from the sale of common stock and warrants, and \$120,000 in revenue during the quarter.

Net cash used by operating activities for the quarter ended March 31, 2011 was \$311,767. In the quarter ended March 31, 2011, we raised \$200,789 in cash receipts from product sales, collaborative research agreements, and government grants.

We believe our cash and cash equivalents on hand as of March 31, 2012, together with amounts to be received from grants and our collaborate research agreements, should be sufficient to fund our ongoing operations as currently planned for at least the next 12 months. We have financed our operations primarily through the sale of common stock and convertible notes, and through revenue derived from grants or collaborative research agreements. We expect to cover our anticipated operating expenses through cash on hand, through additional financing from existing and prospective investors, and from revenue derived from collaborative research agreements.

We may need additional capital to further fund product development and commercialization of its human tissues that can be employed in drug discovery and development, biological research, and as therapeutic implants for the treatment of damaged or degenerating tissues and organs. We cannot be sure that additional financing will be available when needed or that, if available, financing will be obtained on terms favorable to us or to our stockholders. Having insufficient funds may require us to delay, scale back, or eliminate some or all of our development programs or relinquish some or even all of our licensed intellectual property. Failure to obtain adequate financing could eventually adversely affect our ability to operate as a going concern. If we raise additional funds from the issuance of equity securities, substantial dilution to our existing stockholders may result. If we raise additional funds by incurring debt financing, the terms of the debt may involve significant cash payment obligations as well as covenants and specific financial ratios that may restrict our ability to operate our business.



As of March 31, 2012, we had 43,693,241 total issued and outstanding shares of Common Stock, and five year warrants for the opportunity to purchase an additional 24,256,932 shares of Common Stock at \$1.00 per share. If all warrants were exercised on a cash basis, we would realize an additional \$24,256,932 in gross proceeds.

The 2012 Equity Incentive Plan provides for the issuance of up to 6,553,986 shares, or approximately 15% of our outstanding Common Stock, to executive officers, directors, advisory board members and employees. In aggregate issued and outstanding common stock, shares underlying outstanding warrants, and shares reserved for the 2012 incentive plan total 74,504,159 shares of common stock.

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**Off-Balance Sheet Arrangements**

We have no off-balance sheet arrangements, including unrecorded derivative instruments that have or are reasonably likely to have a current or future material effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources. We have certain warrants and options outstanding but we do not expect to receive sufficient proceeds from the exercise of these instruments unless and until the underlying securities are registered, and/or all restrictions on trading, if any, are removed, and in either case the trading price of our Common Stock is significantly greater than the applicable exercise prices of the options and warrants.

**Effect of Inflation and Changes in Prices**

Management does not believe that inflation and changes in price will have a material effect on the Company's operations.

## DIRECTORS AND EXECUTIVE OFFICERS

The following persons are our executive officers, non-executive officers and directors and hold the positions set forth opposite their name as of June 1, 2012:

Name	Age	Position(s)
Keith Murphy	40	Chairman of the Board, Chief Executive Officer, and President
Sharon Collins Presnell, Ph.D.	43	Executive Vice President of Research and Development
Barry D. Michaels	62	Chief Financial Officer
Michael Renard	53	Executive Vice President of Commercial Operations
Eric Michael David, Ph.D.	40	Chief Strategy Officer
Robert Baltera, Jr.	46	Director
Andras Forgacs	35	Director
Adam K. Stern	48	Director

**Keith Murphy, Chairman of the Board, Chief Executive Officer, and President**, is one of our founders and joined us in July 2007. Mr. Murphy was formerly an employee of biotechnology company Alkermes, Inc., where he worked from July, 1993 to July, 1997 and played a role on the development team for their first approved product, Nutropin (hGH) Depot. He moved to Amgen, Inc. in August, 1997 and developed several other novel formulation and device products. He has over 18 years of experience in biotechnology, including serving in Product Strategy and Director of Process Development roles at Amgen through July, 2007. He was previously Global Operations Leader for the largest development program in Amgen's history, osteoporosis/bone cancer drug Prolia/Xgeva (denosumab). He holds a BS in Chemical Engineering from MIT, and is an alumnus of the UCLA Anderson School of Management.

Mr. Murphy's previous experience in the biotechnology field and his educational experience qualify him to be a member of our Board of Directors.

**Dr. Sharon Collins Presnell, Executive Vice President of Research and Development**, joined us in May, 2011. Dr. Presnell has over 15 years of experience in the leadership of product-focused R&D. As an Assistant Professor at the University of North Carolina from 1998 to 2001 Dr. Presnell's research in liver and prostate biology and carcinogenesis produced cell- and tissue-based technologies that were outlicensed for industrial applications. She joined Becton Dickinson & Co. (BD) in July, 2001 and played a key role in the early discovery and development of BD's Discovery Platform and FACS CAP™ tools for the optimization of *in vitro* culture environments and flow cytometry-based characterization of cells. In her role at BD, she grew and led a large multi-disciplinary team to establish feasibility for the Discovery Platform and FACS CAP in multiple therapeutic areas, including diabetes, and stewarded both technologies through revenue-generating commercial partnerships. Dr. Presnell joined Tengion, Inc. in February, 2007 as the Senior Vice President of Regenerative Medicine Research, a position that she held until joining us in May 2011. At Tengion, Dr. Presnell was directly involved in the discovery and early development of Tengion's Neo-Kidney Augment™ technology. Dr. Presnell holds a Ph.D. in Pathology from the Medical College of Virginia.

**Barry D. Michaels, Chief Financial Officer**, joined us in August, 2011. Mr. Michaels was the Chief Financial Officer of Cardima, Inc., a publicly-traded medical device company (NASDAQ: CRDM), from July, 2003 through June, 2005, and thereafter a consultant to the company through January, 2008. Mr. Michaels has been an independent consultant to medical device and technology companies since 1997, and has more than 30 years of combined industry experience. Since January, 2008 and prior to joining us, Mr. Michaels's devoted his time to his consulting practice. In addition to his consulting practice, Mr. Michaels served as Chief Financial Officer of Lipid Sciences (NASDAQ: LIPD), a biotechnology company, from May, 2001 through January, 2003. Prior to joining Lipid Sciences, Mr. Michaels served as the Chief Financial Officer of IntraTherapeutics, Inc., an endovascular company, from March, 2000 until its acquisition by Sulzer Medica in May, 2001. Mr. Michaels received an MBA in finance from San Diego State University and is a graduate of the Executive Program at the University of California, Los Angeles.

**Michael Renard, Executive Vice President of Commercial Operations**, joined us in May, 2012. Mr. Renard has more than 29 years of experience in commercial operation, business development and sales and marketing for the life science industry. Since 1997, he has worked with Beckman Coulter holding various positions in program management, business operations and business development. He most recently was the vice president of marketing for North America commercial operations where he was responsible for achieving \$2 billion in revenue across 11 major product lines. Before Beckman Coulter, he was vice president and general manager in a start-up development stage incubator division of Sanofi, Inc. and director of corporate accounts at Kallestad Diagnostics. He has a M.B.A from Rockhurst University and a B.A. in biology and chemistry from St. Olaf College.

**Dr. Eric Michael David, Chief Strategy Officer**, joined us in May, 2012. Dr. David was most recently associate partner at the consultancy McKinsey & Company, where he served private equity, pharmaceutical, biotech, diagnostic, and medical device clients to support pipeline and R&D strategy, as well as market entry strategy. Dr. David played a critical role in the commercial translation of 3D bioprinting as a founder and early director of Organovo, Inc. Prior to his time at McKinsey, Dr. David served as a freelance consultant to the Department of Health and Human Services in the use of genomic technologies for early detection of pathogens for public health preparedness. He completed his residency in Internal Medicine at New York Presbyterian Hospital, where he served as Assistant Chief Resident and received the Dick Bowman Award for scientific endeavor and dedication to patient care. He was also Assistant Professor at The Rogosin Institute and adjunct faculty at The Rockefeller University. He received his M.D. from Columbia University College of Physicians and Surgeons, his J.D. from Columbia University School of Law, and a B.A. in physics and fine arts from Amherst College. He is board certified in Internal Medicine and admitted to the Bar in New York State.

**Robert Baltera, Jr., Director**, joined us as a director in October, 2009. Most recently, Mr. Baltera was the Chief Executive Officer of Amira Pharmaceuticals, a position he held from July, 2007 through September, 2011. Amira was sold to Bristol-Myers Squibb in September, 2011 for \$325 million in cash upfront, plus additional milestone payments of up to \$150 million. Mr. Baltera is a seasoned pharmaceutical industry executive who has acquired a wealth of business and product management experience during his 17 years with biotech pioneer Amgen, beginning November, 1990. In his role leading Amira Pharmaceuticals, he was instrumental in focusing the company's development efforts, strengthening and developing its pipeline and forging key collaborations with partners such as GlaxoSmithKline. Before becoming Amira's CEO, he held a number of senior management positions at Amgen, the last being vice president of corporate and contract manufacturing. He served as Amgen's team leader responsible for the approval of Kineret™ in rheumatoid arthritis. Mr. Baltera has an MBA from the Anderson School at UCLA and earned his bachelor's degree in microbiology and a master's degree in genetics from The Pennsylvania State University.

Mr. Baltera's previous experience in the biotechnology field and his educational experience qualify him to be a member of our Board of Directors.

**Andras Forgacs, Director**, is one of our founders and joined us as a director in April, 2007. Mr. Forgacs has served as a Managing Director at Richmond Global, an international technology-focused venture fund, since July, 2008. In his role at Richmond, Mr. Forgacs focuses on the day-to-day management of the fund and the sourcing of new investment opportunities. Prior to joining Richmond, beginning in November, 2005, he was a consultant in the New York office of McKinsey & Company advising global financial institutions, healthcare/pharmaceutical companies and private equity/venture capital firms. Mr. Forgacs began his career with Citigroup as an investment banker in the Financial Strategy Group in July, 1999, and helped found the client-facing E-commerce Group. Mr.

Forgacs is a Kauffman Fellow with the Center for Venture Education and a Term Member with the Council on Foreign Relations. He holds an MBA from the Wharton School of Business and

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a Bachelor of Arts with honors from Harvard University. Mr. Forgacs is the son of Gabor Forgacs, Ph.D., who developed Organovo's breakthrough organ printing technology while leading a team of top regenerative medicine scientists from multiple universities, with the backing of a \$5MM National Science Foundation Grant. Dr. Forgacs was one of the founders of the Company.

Mr. Forgacs' previous experience with "start-up" companies in the equity/venture capital field and his educational experience qualify him to be a member of our Board of Directors.

**Adam K. Stern, Director**, joined us in February 2012 and is the Senior Managing Director of Spencer Trask Ventures. Mr. Stern has over 20 years of venture capital and investment banking experience focusing primarily on the technology and life science sectors of the capital markets. He currently manages the structured finance group of Spencer Trask Ventures, Inc. Mr. Stern joined Spencer Trask Ventures in September 1997 from Josephthal & Co., members of the New York Stock Exchange, where he served as Senior Vice President and Managing Director of Private Equity Marketing and held increasingly responsible positions from 1989 to 1997. He has been a licensed securities broker since 1987 and a General Securities Principal since 1991. Mr. Stern currently sits on the boards of various private companies and one other public company, InVivo Therapeutics Holdings Corp. (OTCBB:NVIV). Mr. Stern holds a Bachelor of Arts degree with honors from The University of South Florida in Tampa.

Mr. Stern's experience as a board member of privately held and publicly traded companies qualifies him to be a member of our Board of Directors. Additionally, his 20 years of venture capital and investment banking focusing on technology and life science sectors will be an asset to the Board of the Directors if we attempt to raise capital in the future.

### **Family Relationships**

Andras Forgacs is the son of Gabor Forgacs, who developed Organovo's breakthrough organ printing technology while leading a team of top regenerative medicine scientists from multiple universities, with the backing of a \$5MM National Science Foundation Grant. Dr. Forgacs was one of the founders of the Company.

### **Board of Directors and Corporate Governance**

Our Board of Directors currently consists of four (4) members. On the Closing of the Merger, Deborah Lovig and James Coker, the members of the Board of Directors of Pubco, resigned, and simultaneously therewith, a new Board of Directors was appointed. Our Board consists of three (3) members who were former directors of Organovo and Adam K. Stern, who was appointed at the Closing of the Merger at the request of the Placement Agent.

#### *Board Independence and Committees*

We are not currently listed on any national securities exchange or in an inter-dealer quotation system that has a requirement that the Board of Directors be independent. However, in evaluating the independence of our members and the composition of the committees of our Board of Directors, our Board utilizes the definition of "independence" as that term is defined by applicable listing standards of the Nasdaq Stock Market and SEC rules, including the rules relating to the independence standards of an audit committee and the non-employee director definition of Rule 16b-3 promulgated under the Exchange Act.

Our Board of Directors expects to continue to evaluate its independence standards and whether and to what extent the composition of the Board and its committees meets those standards. We ultimately intend to appoint such persons to our Board and committees of our Board as are expected to be required to meet the corporate governance requirements imposed by a national securities exchange. Therefore, we intend that a majority of our directors will be independent directors of which at least one director will qualify as an "audit committee financial expert," within the meaning of Item 407(d)(5) of Regulation S-K, as promulgated by the SEC.

Additionally, our Board of Directors is expected to appoint an audit committee, governance committee and compensation committee and to adopt charters relative to each such committee.

We believe that Robert Baltera is an "independent" director as that term is defined by SEC rules, including the rules relating to the independence standards of an audit committee and the non-employee director definition of Rule 16b-3 promulgated under the Exchange Act.

#### *Code of Ethics*

We have not adopted a written code of ethics. We intend to adopt a written code of ethics in the future.

#### *Indemnification Agreements*

Our Board has approved a form of indemnification agreement for our directors and executive officers ("Indemnification Agreement"). Following Board approval, we entered into Indemnification Agreements with each of our current directors and executive officers.

The Indemnification Agreement provides for indemnification against expenses, judgments, fines and penalties actually and reasonably incurred by an indemnitee in connection with threatened, pending or completed actions, suits or other proceedings, subject to certain limitations. The Indemnification Agreement also provides for the advancement of expenses in connection with a proceeding prior to a final, nonappealable judgment or other adjudication, provided that the indemnitee provides an undertaking to repay to us any amounts advanced if the indemnitee is ultimately found not to be entitled to indemnification by us. The Indemnification Agreement sets forth procedures for making and responding to a request for indemnification or advancement of expenses, as well as dispute resolution procedures that will apply to any dispute between us and an indemnitee arising under the Indemnification Agreement.

The foregoing description is qualified in its entirety by reference to the form of Indemnification Agreement attached to this Report as Exhibit 10.17.

#### *Classified Board*

Our Board of Directors is divided into three classes (each, a "Class"). The term of office of the initial Class I director (Mr. Murphy) shall expire at the first regularly-scheduled annual meeting of the stockholders following January 30, 2012, which was the date of our reincorporation in Delaware (the "Effective Date"), the term of office of the initial Class II directors (Messrs. Forgacs and Stern) shall expire at the second annual meeting of the stockholders following the Effective Date and the term of office of the initial Class III director (Mr. Baltera) shall expire at the third annual meeting of the stockholders following the Effective Date. At each annual meeting of stockholders, commencing with the first regularly-scheduled annual meeting of stockholders following the Effective Date, each of the successors elected to replace the directors of a Class whose term expires at such annual meeting shall be elected to hold office for a three year term.



## Scientific And Business Advisory Boards

### **Gabor Forgacs, Scientific Founder – PhD – University of Missouri and Clarkson University**

Dr. Forgacs, is one of our founders. Dr. Forgacs is the Executive and Scientific Director of the Shipley Center for Innovation at Clarkson University and the George H. Vineyard Professor of Biological Physics at the University of Missouri. Dr. Forgacs has been with the University of Missouri since 1999 and has been with Clarkson University since 2011. He developed Organovo's breakthrough bioprinting technology while leading a team of regenerative medicine scientists from multiple universities, with the backing of a \$5 million National Science Foundation Grant. Dr. Forgacs is the author of more than 150 peer reviewed journal articles and the textbook Biological Physics of the Developing Embryo, (with Stuart Newman), published by Cambridge University Press. He holds a Ph.D. in theoretical physics from the Roland Eotvos University, Budapest, Hungary. He moved to the United States in the 1980's from the Institute of Physics of the French Atomic Energy Agency in Saclay to accept a professorship at Clarkson University. Dr. Forgacs is the father of Andras Forgacs.

### **Gordana Vunjak-Novakovic, PhD—Columbia**

Dr. Vunjak-Novakovic is the Mikati Foundation Professor of Biomedical Engineering and Medicine at Columbia University, where she directs the Laboratory for Stem Cells and Tissue Engineering, the Bioreactor Core of the NIH Tissue Engineering Center, the Stem Cell Imaging Core and the Craniofacial Regeneration Center. Prof. Vunjak-Novakovic has authored books as well as numerous book chapters, journal articles and issued, licensed and pending patents in the biomedical field. She is a Fellow of the American Institute for Medical and Biological Engineering.

### **Glenn Prestwich, PhD – University of Utah**

Dr. Glenn D. Prestwich is Presidential Professor of Medicinal Chemistry and Special Presidential Assistant for Faculty Entrepreneurism at the University of Utah, where he leads the Entrepreneurial Faculty Scholars program. His university research includes the study of biomaterials for tissue repair and tissue engineering and biological reagents. He co-founded multiple companies, including Carbylan BioSurgery, Inc. (medical devices), Sentrax Animal Care, Inc. (veterinary wound care), and Glycosan BioSystems, Inc. (cell therapy and research tools). He received the Governor's Medal for Science and Technology for 2006, the 1998 Paul Dawson Biotechnology Award and the 2008 Volwiler Research Award of the AACP, the 2010 University of Utah Distinguished Scholarly and Creative Research Award, and the 2010 "Rooster Prize" of the International Society for Hyaluronan Science.

### **David Mooney, PhD – Harvard University**

Prof. David Mooney is a scientific author and a leader in the research of signaling mechanisms of tissue development. He studies the mechanisms by which chemical (for example, specific cell adhesion molecules) or mechanical signals (for example, cyclic strain) are sensed by cells and alter cells' proliferation and specialization to either promote tissue growth or destruction. This work assists in the understanding of cell behavior post-processing by the organ printing technology. Dr. Mooney is the Pinkas Family Professor of Bioengineering at Harvard University, a member of the National Academy of Engineering, and holds a PhD from the Massachusetts Institute of Technology.

### **Dr. K. Craig Kent, MD – Columbia University/Weill Cornell Medical College**

Dr. K. Craig Kent is the Chairman of the Department of Surgery at the University of Wisconsin School of Medicine and Public Health and previously served as Chief of the Division of Vascular Surgery at both Columbia University and Weill Cornell Medical College. Dr. Kent has authored or co-authored more than 300 manuscripts and chapters that have been published in peer-reviewed journals and textbooks on vascular disease. He is regularly invited to speak at local, national and international scientific meetings on a wide variety of vascular surgery topics. His National Institutes of Health (NIH)-funded basic science lab explores the mechanisms of failure for bypass grafts and angioplasty following vascular intervention. Dr. Kent served as the 2006-2007 president of the Society for Vascular Surgery. Dr. Kent was trained in general surgery at the University of California at San Francisco and completed his vascular surgery fellowship at Brigham and Women's Hospital-Harvard Medical School, where he was awarded the prestigious annual E.J. Wylie Traveling Fellowship.

In March, 2008, we entered into consulting agreements with Dr. Glenn Prestwich, Prof. David Mooney, and Dr. K. Craig Kent, all of whom are members of our Scientific Advisory Board. In April, 2008, we entered into a consulting agreement with Prof. Gordana Vunjak-Novakovic, the fourth member of our Scientific Advisory Board. Per these agreements, we made restricted stock grants of 235,483 shares of our Common Stock to Dr. Prestwich and Prof. Vunjak-Novakovic and 117,741 shares of our Common Stock to Prof. Mooney and Dr. Kent. These grants vest in four annual equal installments with the first installment vesting on the one year anniversary of the member's appointment to our Scientific Advisory Board. In addition, we agreed to pay Prof. Mooney \$14,000 per year and Dr. Kent \$7,000 per year. Each of the consulting agreements has a four year term which may be terminated by either us or the Scientific Advisory Board member on thirty days notice.

## EXECUTIVE COMPENSATION

The following table sets forth information regarding each element of compensation that we paid or awarded to our named executive officers and for fiscal year ended December 31, 2011 and 2010.

### Summary Compensation Table

Name and Principal Position	Year	Salary	Option Awards (\$)	Deferred Compensation (\$)	All Other Compensation (\$)	Total Compensation (\$)
Keith Murphy Chairman, Chief Executive Officer, and President	2011	\$217,711 <sup>1,2</sup>	—	—	— <sup>3</sup>	\$ 217,711
	2010	\$ 46,538	—	\$ 63,462 <sup>4</sup>	— <sup>5</sup>	\$ 110,000
Barry D. Michaels Chief Financial Officer	2011	\$ 74,315	—	—	— <sup>6</sup>	\$ 74,315
Sharon Presnell Executive Vice- President of Research and Development	2011	\$157,385	\$ 3,163	—	— <sup>7</sup>	\$ 160,548

### Employment Arrangements with Officers and Directors

Keith Murphy, one of our founders, has served as our President and Chief Executive Office since July, 2007. The terms of Mr. Murphy's employment agreement, dated February 28, 2012, call for him to receive a base salary of \$302,500 per year. The term of the employment agreement expires after one year from the effective date, and automatically renews thereafter, unless we provide Mr. Murphy advanced notice of nonrenewal. Mr. Murphy is also eligible to participate in our Annual Bonus Plan and other short-term incentive compensation plans established for our senior executives by our Board of Directors or the compensation committee. Mr. Murphy is also entitled to participate in our equity incentive awards plans.

Sharon Presnell became our Executive Vice President of Research and Development in May, 2011. The terms of Dr. Presnell's employment arrangement call for her to receive a base salary of \$248,014 per year. Dr. Presnell is also eligible to receive an annual bonus, which is targeted at 30% of her base salary but which may be adjusted based on her individual performance and our performance as a whole. In addition, on October 14, 2011 we issued to Dr. Presnell options to purchase 896,256 shares of Common Stock under the 2008 Plan, which will vest in equal installments over four years from May 2011. If we terminate Dr. Presnell's employment without cause, we are required to pay her a severance of up to six months of her base salary (in effect immediately prior to the date of the termination of her employment) plus benefits.

- 1 Effective August 16, 2011 Mr. Murphy's annual base salary was increased to \$220,000.
- 2 Mr. Murphy was paid an annual salary of \$110,000 beginning March, 2009.
- 3 Excludes payments made for the reimbursement of medical insurance premiums and a personal computer used primarily for business in the aggregate of less than \$10,000.
- 4 Base salary earned, but payment deferred to future periods.
- 5 Excludes payments made for the reimbursement of medical insurance premiums.
- 6 Excludes payments made for the reimbursement of medical insurance premiums in the aggregate of less than \$10,000.
- 7 Excludes payments made for the reimbursement of medical insurance premiums in the aggregate of less than \$10,000. Also excludes \$24,681 in reimbursed relocation expenses that qualify under IRS guidelines as excludable from income.

Barry Michaels became our Chief Financial Officer in August, 2011. The terms of Mr. Michaels' employment arrangement call for him to receive a base salary of \$230,022 per year. Mr. Michaels is also eligible to receive a bonus based on our and his attainment of certain goals and performance milestones. In addition, at the final closing of the Offering following the Closing Date of the Merger we intend to grant Mr. Michaels options to purchase up to 2% of our issued and outstanding Common Stock under the 2011 Plan, which will vest in equal installments over four years from August 2011. If we terminate Mr. Michaels' employment without cause we are required to pay Mr. Michaels a severance of up to six months of his base salary (in effect immediately prior to the date of the termination of his employment) plus benefits.

### Outstanding Equity Awards at Fiscal Year End

The following table summarizes the equity awards made to our named executive officers that were outstanding at December 31, 2011.

Name	No. of Securities Underlying Unexercised Options (#) Exercisable	No. of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price	Option Expiration Date	Number of shares or Units of stock that have not vested(#)	Market Value of shares or Units of stock that have not vested(\$)
Keith Murphy (1)	—	—	—	—	367,947	\$ 57,422
Sharon Presnell (2)	—	896,256	\$ 0.08	5/2021	—	—
Barry Michaels	—	—	—	—	—	—

- (1) These shares vest in February 2012.
- (2) The options were granted on October 14, 2011, and vest in equal installments over four years from May 2011.



## 2012 Equity Incentive Plan

Our Board of Directors and stockholders adopted the 2012 Plan in January 2012. 6,553,986 shares of Common Stock are reserved for issuance under the 2012 Plan. If an incentive award granted under the 2012 Plan expires, terminates, is unexercised or is forfeited, or if any shares are surrendered to us in connection with an incentive award, the shares subject to such award and the surrendered shares will become available for further awards under the 2012 Plan. Additionally, shares used to pay the tax or exercise price of an award will become available for future grant or sale under the 2012 Plan. To the extent an award under the 2012 Plan is paid out in cash rather than shares, the cash payment will not result in reducing the number of shares available for issuance under the 2012 Plan. The maximum number of shares subject to awards that may be granted to any individual during any calendar year is 2,000,000 and the maximum aggregate amount of cash that may be paid in cash during any calendar year with respect to awards payable in cash is \$2,000,000.

The number and class of shares of our Common Stock subject to the 2012 Plan, the number and class of shares subject to any numerical limit in the 2012 Plan, and the number, price and class of shares subject to awards will be adjusted in the event of any change in our outstanding Common Stock by reason of any stock dividend, spin-off, split-up, stock split, reverse stock split, recapitalization, reclassification, merger, consolidation, liquidation, business combination or exchange of shares or similar transaction.

### Administration

It is expected that the compensation committee of the Board, or the Board in the absence of such a committee, will administer the 2012 Plan. Subject to the terms of the 2012 Plan, the compensation committee would have complete authority and discretion to determine the terms of awards under the 2012 Plan.

### Grants

The 2012 Plan authorizes the grant to 2012 Plan participants of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock, restricted stock units, performance units, performance shares, and other stock or cash awards intended to comply with Section 162(m) of the Internal Revenue Code (as amended, the "Code") and stock appreciation rights, as described below:

**Stock Options.** Stock options entitle the participant, upon exercise, to purchase a specified number of shares of common stock at a specified price for a specified period of time. The Administrator may grant incentive and/or non-statutory stock options under the 2012 Plan. The exercise price for each stock option shall be determined by the Administrator but shall not be less than 100% of the fair market value of the common stock on the date of grant. The "fair market value" means, if the stock is listed on any established stock exchange or national market system, the closing sales price of the stock, or, if the common stock is regularly quoted by a recognized securities dealer, but the selling prices are not reported, the mean between the high bid and low asked prices for the common stock on the day of determination, or in the absence of an established market for the stock, or if the stock is not regularly quoted or does not have sufficient trades or bid prices which would reflect the stock's actual fair market value, the fair market value of the common stock will be determined in good faith by the Administrator upon the advice of a qualified valuation expert.

Any stock options granted in the form of an incentive stock option will be intended to comply with the requirements of Section 422 of the Code. Only options granted to employees qualify for incentive stock option treatment.

Each stock option shall expire at such time as the Administrator shall determine at the time of grant. No stock option shall be exercisable later than the tenth anniversary of its grant. A stock option may be exercised in whole or in installments. A stock option may not be exercisable for a fraction of a share. Shares of common stock purchased upon the exercise of a stock option must be paid for in full at the time of exercise in cash or such other consideration determined by the Administrator.

**Stock Appreciation Rights.** A stock appreciation right ("SAR") is the right to receive a payment equal to the excess of the fair market value of a specified number of shares of common stock on the date the SAR is exercised over the exercise price of the SAR. The exercise price for each SAR shall not be less than 100% of the fair market value of the common stock on the date of grant, and the term of an SAR shall be no more than ten years from the date of grant. At the discretion of the Administrator, the payment upon an SAR exercise may be in cash, in shares equivalent thereof, or in some combination thereof.

Upon exercise of an SAR, the participant shall be entitled to receive payment from Pubco in an amount determined by multiplying the excess of the fair market value of a share of common stock on the date of exercise over the exercise price of the SAR by the number of shares with respect to which the SAR is exercised.

**Restricted Stock and Restricted Stock Units.** Restricted stock and restricted stock units may be awarded or sold to participants under such terms and conditions as shall be established by the Administrator. Restricted stock and restricted stock units shall be subject to such restrictions as the Administrator determines, including a prohibition against sale, assignment, transfer, pledge or hypothecation, and a requirement that the participant forfeit such shares or units in the event of termination of employment. A restricted stock unit provides a participant the right to receive payment at a future date after the lapse of restrictions or achievement of performance criteria or other conditions determined by the Administrator.

**Performance Stock.** The Administrator shall designate the participants to whom long-term performance stock/units are to be awarded and determine the number of shares, the length of the performance period and the other vesting terms and conditions of each such award. Each award of performance stock/units shall entitle the participant to a payment in the form of shares/units of common stock upon the attainment of performance goals and other vesting terms and conditions specified by the Administrator. The Administrator may, in its discretion, make a cash payment equal to the fair market value of shares of common stock otherwise required to be issued to a participant pursuant to a Performance Stock Award.

All awards made under the 2012 Plan may be subject to vesting and other contingencies as determined by the Administrator and will be evidenced by agreements approved by the Administrator which set forth the terms and conditions of each award.

### Duration, Amendment, and Termination

Unless sooner terminated by the Board, the 2012 Plan will terminate ten years after its adoption. The Board may amend, alter, suspend or terminate the 2012 Plan at any time or from time to time without stockholder approval or ratification, unless necessary and desirable to comply with applicable law. However, before an amendment may be made that would adversely affect a participant who has already been granted an award, the participant's consent must be obtained.

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**2011 Director Compensation**

The following table sets forth compensation earned and paid to each non-employee director for service as a director during 2011.

Name	Fees Earned or Paid in Cash (\$)	Stock Awards (\$)	Option Awards (\$)	All Other Compensation (\$)	Total (\$)
Robert Baltera, Jr. (1)	—	\$2,898	—	—	\$2,898
Andras Forgacs (2)	—	—	—	—	—
Gabor Forgacs (3)	—	—	—	—	—

- (1) In October, 2009 we entered into a Memorandum of Understanding with Robert Baltera, Jr. in connection with his ongoing service as one of our directors. Pursuant to this arrangement we granted Mr. Baltera 36,228 shares of restricted Common Stock, which vest in four equal annual installments, commencing one year from the date of grant, provided Mr. Baltera remains a director on the applicable vesting date. In October 2011 we additionally granted Mr. Baltera 32,423 shares of restricted Common Stock, one quarter of which vested that month and the remainder of which will vest in three equal annual installments. Our arrangement with Mr. Baltera is terminable at will by either party.
- (2) In February, 2008 we issued 60,365 shares of restricted Common Stock to Andras Forgacs as compensation for his services as a director. These shares vested to the extent of 25% of the original grant on the first anniversary of the grant date, and thereafter at the rate of 6.25% of the original grant on a quarterly basis, provided that Mr. Forgacs remains a director on the applicable vesting date.
- (3) Gabor Forgacs resigned as a director effective February 8, 2012.

**SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following tables set forth certain information regarding the beneficial ownership of our common stock as of June 1, 2012 by (i) each person who, to our knowledge, owns more than 5% of our common stock; (ii) each of our directors and named executive officers; and (iii) all of our executive officers and directors as a group. Unless otherwise indicated in the table or the footnotes to the following table, each person named in the table has sole voting and investment power and that person's address is c/o Organovo Holdings, Inc., 5871 Oberlin Drive, Suite 150, San Diego, CA 92121. Shares of Common Stock subject to options or warrants currently exercisable or exercisable within 60 days of June 1, 2012 are deemed outstanding for computing the share ownership and percentage of the person holding such options and warrants, but are not deemed outstanding for computing the percentage of any other person. Applicable percentages are based on 43,793,241 shares of common stock outstanding as of June 1, 2012.

Name and address of Beneficial Owner	No. Shares of Common Stock Beneficially Owned	Percent of Common Stock Outstanding
Keith Murphy (1)	6,311,092(2)	14.4%
Gabor Forgacs	6,057,741(3)	13.9%
Andras Forgacs (1)	766,588	1.8%
Robert Baltera, Jr. (1)	126,392(4)	*
Barry D. Michaels (1)	20,000(8)	*
Sharon Collins Presnell (1)	224,064(9)	*
Eric Michael David (1)	814,306(10)	1.9%
Adam K. Stern (1)(5) c/o Spencer Trask Ventures 750 Third Avenue New York, NY 10017	1,604,484	4.0%
Kevin Kimberlin (6) 1700 East Putnam Avenue Suite 401 Greenwich, CT 06870	5,489,433	11.4%
<i>All directors and executive officers as a group (7 persons)</i>	10,025,796(7)	22.9%

\* Less than 1.0%

(1) Executive officer and/or director.

(2) 255,255 of these shares are held by Equity Trust Co., Custodian FBO Keith Murphy IRA. Includes warrants to purchase 30,000 shares of Common Stock at an exercise price of \$1.00 per share.

(3) Includes warrants to purchase 3,750 shares of Common Stock at an exercise price of \$1.00 per share.

(4) 18,114 of these shares vested in or before October, 2011. Includes warrants to purchase 28,000 shares of Common Stock at an exercise price of \$1.00 per share.

(5) Represents (i) 741,395 shares owned by Adam Stern, (ii) 360,000 shares underlying warrants owned by Adam Stern; (iii) 158,870 shares owned by ST Neuroscience Partners, LLC; (iv) 211,827 shares owned by Pavilion Capital Partners, LLC; and (v) 132,392 shares owned by Piper Venture Partners, LLC. Does not include shares underlying warrants held by the Placement Agent or its affiliates issued in connection with the Bridge Financing or the Offering.

(6) Represents (i) 1,082,489 shares held by Spencer Trask Investment Partners, LLP and (ii) 4,406,943 shares underlying warrants owned by Spencer Trask Ventures, Inc. issued in connection with the Bridge Financing or the Offering.

(7) Includes warrants to purchase 448,000 shares of Common Stock at an exercise price of \$1.00 per share. Does not include shares underlying warrants issued to the Placement Agent in connection with the Bridge Financing or the Offering.

(8) Includes warrants to purchase 10,000 shares of Common Stock at an exercise price of \$1.00 per share. Does not include 62,500 additional shares of common stock subject to future vesting pursuant to a stock option agreement.

(9) Stock option shares that will vest within 60 days of June 1, 2012. Does not include 847,192 additional shares of common stock subject to future vesting pursuant to the terms of stock option agreements.

(10) Includes warrants to purchase 20,000 shares of Common Stock at an exercise price of \$1.00 per share.

**Changes in Control**

We are not aware of any or a party to arrangements, including any pledge by any person of our securities, the operation of which may at a subsequent date result in a change of control.

## CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

### Transactions with Pubco Shareholders

#### *Forward Split, Split-Off and Share Cancellation*

Real Estate Restoration and Rental, Inc.'s ("RERR") common stock was forward-split on a 10.5913504 for 1 basis, with a record date of January 23, 2012 and an effective date of January 31, 2012. As a result of this stock split and the Reincorporation Merger, there were approximately 6,000,000 shares of Pubco's common stock issued and outstanding before taking into account the issuance of shares of common stock to purchasers of Units in the Offering and in the Merger and after giving pro forma effect to the Split-Off, as discussed below.

Upon the closing of the Merger, Pubco transferred all of its operating assets and liabilities to Organovo Split Corp., a Delaware corporation ("PSOS"), and split-off PSOS (the "Split-Off") through the sale of all of the outstanding capital stock of PSOS to its executive officers, directors and their affiliates (the "Split-Off Shareholders"). In connection with the Split-Off, 5,000,000 shares of common stock held by the Split-Off Shareholders were surrendered and cancelled without further consideration, other than the receipt of PSOS shares. An additional 1,236,000 shares of common stock were cancelled by other shareholders of Pubco for no or nominal consideration.

#### *Transactions with the Placement Agent and its Related Parties*

We retained Spencer Trask Ventures, Inc. to serve as our placement agent (the "Placement Agent") in connection with the Bridge Financing (as defined below), the Merger and the Offering as described in this prospectus. Adam K. Stern, one of our directors, is a Senior Managing Director of the Placement Agent.

The Placement Agent acted as finder to Organovo in connection with our bridge financing, in which Organovo issued \$1,500,000 in principal amount of its 6% convertible promissory notes due March 31, 2012 (the "Bridge Notes") and warrants to purchase an aggregate of 1,500,000 shares of Organovo's common stock at a price of \$1.00 per share (the "Bridge Warrants") to accredited investors (the "Bridge Financing"). The Placement Agent was issued warrants to purchase Organovo warrants that automatically converted into warrants to purchase 20% of the shares of Pubco Common Stock underlying the Units issued upon the conversion of the Bridge Notes in the Offering (as defined below) at a price of \$1.00 per share per share as compensation for acting as a finder in the Bridge Financing. These warrants were exchanged at the initial close of the Offering for warrants (which are identical to the Placement Agent Warrants (as defined below) discussed below) to purchase 610,155 shares of common stock at an exercise price of \$1.00 per share.

Prior to the initial closing of the Offering, several related parties to the Placement Agent purchased an aggregate of 219,705 shares of Pubco's common stock (2,326,974 shares on a post stock split adjusted basis) from various shareholders of Pubco. The aggregate purchase price paid to such shareholders by the related parties for such shares was approximately \$155,000. All of the foregoing shares of common stock are subject to a lock-up agreement. See "Lock-ups" below.

We engaged the Placement Agent as our exclusive placement agent in connection with a the Offering. For its services, we paid the Placement Agent (i) a cash fee equal to 10% of the gross proceeds raised in the Offering and (ii) a non-accountable expense allowance equal to 3% of the gross proceeds raised in the Offering. In addition, we granted to the Placement Agent or its designees, for nominal consideration, five-year warrants ("Placement Agent Warrants") to purchase shares of common stock at an exercise price of \$1.00 per share. The placement agent and its selected dealers were paid total cash commissions of \$1,372,260 and the Placement Agent was paid an expense allowance of \$411,678 and was issued Placement Agent Warrants to purchase 6,099,195 shares of common stock (including 610,155 warrants issued in connection with issuance of the bridge promissory notes and subsequently exchanged for new warrants in the Merger).

We have agreed to engage the Placement Agent as our warrant solicitation agent in the event the warrants issued to investors in the Offering (the "Investor Warrants") are called for redemption and shall pay a warrant solicitation fee to the Placement Agent equal to five (5%) percent of the amount of funds solicited by the Placement Agent upon the exercise of the Investor Warrants following such redemption.

The Placement Agent was granted the right to designate one member to our Board of Directors and has designated Adam K. Stern to fill such Board seat.

The price of the Units was been determined following our discussions with the Placement Agent. Among the factors considered in the negotiations were our limited operating history, our history of losses, an assessment of our management and our proposed operations, our current financial condition, the prospects for the industry in which we operate, the prospects for the development of our business with the capital raised in the Offering and the general condition of the securities markets at the time of the Offering. The Offering price of the Units or the exercise price of the Investor Warrants did not necessarily bear any relationship to our assets, book value or results of operations or any other generally accepted criterion of value.

As a result of these transactions, as of April 13, 2012, Mr. Stern reported holding 741,395 shares of common stock and warrants to purchase 360,000 shares of common stock. He also reported indirect beneficial ownership of 158,870 shares owned by ST Neuroscience Partners, LLC, 211,827 shares owned by Pavilion Capital Partners, LLC; and 132,392 shares owned by Piper Venture Partners, LLC. As of April 27, 2012, Mr. Kimberlin reported indirect beneficial ownership of 1,082,489 shares held by Spencer Trask Investment Partners, LLP and warrants to purchase 4,406,943 shares owned by Spencer Trask Ventures, Inc. issued in connection with the Bridge Financing or the Offering.

We have agreed to indemnify the Placement Agent and other broker-dealers who are FINRA members selected by the Placement Agent to offer and sell Units, to the fullest extent permitted by law for a period of four (4) years from the closing of the Offering, against certain liabilities that may be incurred in connection with the Offering, including certain civil liabilities under the Securities Act, and, where such indemnification is not available, to contribute to the payments the Placement Agent may be required to make in respect of such liabilities. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to the Placement Agent, pursuant to the foregoing provisions or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

#### *Lock-ups*

Officers, directors and holders of 5% or more of our common stock have agreed to "lock-up" and not sell or otherwise transfer or hypothecate any of their shares for a term equal to the earlier of (i) twelve (12) months from the Closing Date of the Merger; or (ii) six (6) months following the effective date of the registration statement of which this prospectus forms a part registering the shares of common stock that were sold in the Offering.

## **WHERE YOU CAN FIND MORE INFORMATION**

We are subject to the informational requirements of the Exchange Act. Accordingly, we file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any document that we file at the SEC's public reference room at 100 F Street, NE, Washington, DC 20549. Information about the operation of the public reference room may be obtained by calling the SEC at 1-800-SEC-0330. Our SEC filings are also available to you free of charge at the SEC's web site at <http://www.sec.gov>.

You can read and print press releases, financial statements, our most recent annual and quarterly reports and additional information about us, free of charge, at our web site at <http://www.organovo.com>.

This prospectus is a part of a registration statement on Form S-1 filed by us with the SEC under the Securities Act. This prospectus does not contain all of the information set forth in the registration statement, certain parts of which are omitted in accordance with the rules and regulations of the SEC. For further information with respect to us and the shares of our common stock offered hereby, please refer to the registration statement. The registration statement may be inspected at the public reference facilities maintained by the SEC at the addresses set forth above. Statements in this prospectus about any document filed as an exhibit are not necessarily complete and, in each instance, you should refer to the copy of such document filed with the SEC. Each such statement is qualified in its entirety by such reference.

## **INTEREST OF NAMED EXPERTS AND COUNSEL**

No expert or counsel named in this prospectus as having prepared or certified any part of this prospectus or having given an opinion upon the validity of the securities being registered or upon other legal matters in connection with the registration or offering of the common stock was employed on a contingency basis, or had, or is to receive, in connection with the offering, a substantial interest, direct or indirect, in the registrant or any of its parents or subsidiaries. Nor was any such person connected with the registrant or any of its parents or subsidiaries as a promoter, managing or principal underwriters, voting trustee, director, officer, or employee.

The consolidated financial statements of Organovo, Inc. as of December 31, 2011 and 2010 have been included in this prospectus in reliance upon the report of Mayer Hoffman McCann P.C., an independent registered public accounting firm, appearing elsewhere herein, given upon the authority of said firm as experts in accounting and auditing.

Certain legal matters in connection this registration statement are being passed upon by the law firm DLA Piper LLP (US), San Diego, California.

**15,347,987 shares of Common Stock**  
**16,747,987 shares of Common Stock Issuable Upon the exercise of Warrants**

PRELIMINARY PROSPECTUS

, 2012

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**PART II — INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

Expenses estimated to be incurred by Organovo Holdings, Inc. for the issuance and distribution of this prospectus are as follows:

SEC registration fee	\$ 11,116
Printing and reproduction costs	—
Legal and accounting fees and expenses	25,000
Total	\$36,116

**Item 14. Indemnification of Directors and Officers.**

Under Section 145 of the General Corporation Law of the State of Delaware, we may indemnify our directors and officers against liabilities they may incur in such capacities, including liabilities under the Securities Act. Our certificate of incorporation provides that, pursuant to Delaware law, our directors shall not be liable for monetary damages for breach of the directors' fiduciary duty of care to us and our stockholders. This provision does not eliminate the duty of care, and in appropriate circumstances equitable remedies such as injunctive or other forms of non-monetary relief will remain available under Delaware law. In addition, each director will continue to be subject to liability for breach of the director's duty of loyalty to us or our stockholders for acts or omissions not in good faith or involving intentional misconduct or knowing violations of the law, for actions leading to improper personal benefit to the director, and for payment of dividends or approval of stock repurchases or redemptions that are unlawful under Delaware law. The provision also does not affect a director's responsibilities under any other law, such as the federal securities laws or state or federal environmental laws.

Our bylaws provide for the indemnification of its directors to the fullest extent permitted by the Delaware General Corporation Law. Our bylaws further provide that our Board of Directors has discretion to indemnify our officers and other employees. We are required to advance, prior to the final disposition of any proceeding, promptly on request, all expenses incurred by any director or executive officer in connection with that proceeding on receipt of an undertaking by or on behalf of that director or executive officer to repay those amounts if it should be determined ultimately that he or she is not entitled to be indemnified under our bylaws or otherwise. We are not, however, required to advance any expenses in connection with any proceeding if a determination is reasonably and promptly made by our Board of Directors by a majority vote of a quorum of disinterested Board members that (i) the party seeking an advance acted in bad faith or deliberately breached his or her duty to us or to our stockholders and (ii) as a result of such actions by the party seeking an advance, it is more likely than not that it will ultimately be determined that such party is not entitled to indemnification pursuant to the applicable sections of our bylaws.

**Item 15. Recent Sales of Unregistered Securities.****Sales by Organovo**

From February 2008 through August 2011, Organovo sold unsecured convertible promissory notes in the aggregate principal amount of \$3,130,000 in private placements to a limited number of accredited investors. Under their original terms, these notes generally were to convert into shares of Organovo common stock upon the occurrence of certain events or, if not so converted, into shares of Organovo preferred stock at maturity. In addition, Organovo agreed to issue common stock purchase warrants to the noteholders upon conversion. The note sales were exempt from the registration requirements of Federal and State securities laws pursuant to Section 4(2) of the Securities Act of 1933 (the "Securities Act") and Rule 506 of Regulation D under the Securities Act. Prior to the closing of the Bridge Financing (as discussed below), \$3,030,000 principal amount of these notes, plus accrued interest, were exchanged for an aggregate of 7,676,828 shares of Organovo common stock and 1,309,750 warrants to purchase Organovo common stock at an exercise price of \$1.00 per share. One note, in the original principal amount of \$100,000, plus accrued interest, was repaid from the proceeds of the Offering, at which time warrants to purchase 100,000 shares of Common Stock were issued to the holder.

In October and November 2011, Organovo completed its Bridge Financing wherein it sold \$1,500,000 in principal amount of its 6% convertible promissory notes due March 31, 2012 (the "Bridge Notes") and 1,500,000 common stock purchase warrants (the "Bridge Warrants") to accredited investors (the "Bridge Financing"). Principal and accrued interest on the Bridge Notes were converted into Units in the Offering (as discussed below) and the Bridge Warrants were exchanged for 1,500,000 New Bridge Warrants to acquire 1,500,000 shares of our Common Stock at a price of \$1.00 per share. The Placement Agent acted as a selling agent to Organovo in connection with the Bridge Financing and received as compensation for its services (i) a sales commission of 10% of the amount raised, or \$150,000, (ii) a 3% non-accountable expense allowance, or \$45,000 and (iii) Organovo warrants that converted upon the closing of the Merger into warrants to purchase 610,155 shares of our Common Stock at a price of \$1.00 per share.

In February and March 2012, the Company received gross proceeds of \$15,247,987 from the private placement (the "Offering") of equity securities (the "Units"). On February 8, February 29, and March 16, 2012, the Company completed the first, second and final closings, respectively, of the private placement offering. In these three closings, 6,525,887 Units, 1,806,100 Units, and 6,916,000 Units, respectively, were sold to accredited investors at a price of \$1.00 per Unit, including the conversion of \$1,500,000 of principal and \$25,379 of accrued interest under certain bridge promissory notes issued in 2011. The first closing was conducted simultaneously with the completion of the Company's merger (the "Merger") with Organovo, Inc. The notes automatically converted into equity securities on February 8, 2012, as part of the private placement offering. Each Unit consisted of one share of common stock of the Company, \$0.001 par value per share, and a 5 year warrant to purchase one share of Common Stock at \$1.00 per share. Total net proceeds were \$11,593,065.91 (or \$12,811,897.11, including the conversion of the bridge promissory notes referred to above). The Company issued 15,247,987 shares and 16,747,987 warrants (including 1,500,000 warrants to former holders of the bridge promissory notes).

In July 2011, the Company issued 100,000 shares of common stock to a consultant.

The transactions described above were exempt from registration under Section 4(2) of the Securities Act and Rule 506 of Regulation D thereunder.

In April 2012, we issued stock options to our employees to purchase 305,658 shares of common stock under our 2012 Equity Incentive Plan at an exercise price of \$2.25 per share. These issuances were exempt from registration under Rule 701 of the Securities Act.

**Sales by Our Predecessor, RERR**

On January 30, 2012, we issued common stock to stockholders of Organovo Holdings, Inc., a Nevada corporation (formerly known as Real Estate Restoration and Rental, Inc. or "RERR") and our sole stockholder, in connection with our reincorporation in Delaware. Such transaction was not a "sale" within the meaning of Section 2(3) of the Securities Act because it came within the exemption under Rule 145(a)(2) of the Securities Act.

Deborah Lovig, RERR's President, Chief Executive Officer, Chief Financial Officer and Director, purchased 5,000,000 (pre-split) shares of RERR common stock on December 19, 2009 for \$100 in cash and \$400 worth of services which she provided to RERR.

James Coker, RERR's Secretary and Director, purchased 80,000 shares of RERR common stock on March 17, 2010 and an additional 15,000 shares of RERR common stock on April 2, 2010, for a total of 95,000 shares, for \$9,500.



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In June, 2010, RERR completed the sale of a total of 1,802,500 shares of common stock to a number of investors, at a price of \$0.10 per share, for aggregate offering proceeds of \$180,250.

The transactions described above were exempt from registration under Section 4(2) of the Securities Act and/or Rule 506 of Regulation D thereunder.

### **Item 16. Exhibits.**

**(a) Exhibits required by Item 601 of Regulation S-K.** The following exhibits are filed as a part of, or incorporated by reference into, this Registration Statement:

<u>Exhibit No.</u>	<u>Description</u>
2.1	Agreement and Plan of Merger and Reorganization, dated as of February 8, 2012, by and among Organovo Holdings, Inc. a Delaware corporation, Organovo Acquisition Corp., a Delaware corporation and Organovo, Inc., a Delaware corporation (incorporated by reference from Exhibit 2.1 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
2.2	Certificate of Merger as filed with the Delaware Secretary of State effective February 8, 2012 (incorporated by reference from Exhibit 2.2 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
2.3	Articles of Merger as filed with the Nevada Secretary of State effective December 28, 2011 (incorporated by reference from Exhibit 2.1 to the Company's Current Report on Form 8-K, as filed with the Securities and Exchange Commission (the "SEC") on February 3, 2012 (the "February 2012 Form 8-K")
2.4	Agreement and Plan of Merger, dated as of December 28, 2011, by and between Real Estate Restoration and Rental, Inc. and Organovo Holdings, Inc. (incorporated by reference from Exhibit 2.2 to the Company's Current Report on Form 8-K, as filed with the SEC on January 4, 2012)
2.5	Certificate of Merger as filed with the Delaware Secretary of State effective January 30, 2012 (incorporated by reference from Exhibit 2.3 to the February 2012 Form 8-K)
2.6	Agreement and Plan of Merger, dated as of January 30, 2012, by and between Organovo Holdings, Inc. (Nevada) and Organovo Holdings, Inc. (Delaware) (incorporated by reference from Exhibit 2.2 to the February 2012 Form 8-K)
2.7	Articles of Merger as filed with the Nevada Secretary of State effective January 30, 2012 (incorporated by reference from Exhibit 2.4 to the February 2012 Form 8-K)
3.1(i)	Articles of Incorporation of Real Estate Restoration and Rental, Inc. (incorporated by reference from Exhibit 3.1 to the Company's registration statement (SEC File No. 333-169928) on Form S-1, as filed with the SEC on October 13, 2010
3.1(ii)	Certificate of Incorporation, Certificate of Change of Registered Agent and/or Registered Office, Certificate of Correction, and Certificate of Amendment of Certificate of Incorporation, each of Organovo, Inc., as filed with the Secretary of State of the State of Delaware on April 19, 2007, January 30, 2009, July 29, 2010, and September 28, 2011 respectively (incorporated by reference from Exhibit 10.25 to the Company's Current Report on Form 8-K/A, as filed with the SEC on March 30, 2012)
3.1(iii)	Certificate of Incorporation of Organovo Holdings, Inc. (Delaware) (incorporated by reference from Exhibit 3.1 to the February 2012 Form 8-K)
3.2	Bylaws of Organovo Holdings, Inc. (Delaware) (incorporated by reference from Exhibit 3.2 to the February 2012 Form 8-K)
4.1	Form of Bridge Warrant of Organovo, Inc. (incorporated by reference from Exhibit 4.1 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.2	Form of Bridge Promissory Note of Organovo, Inc. (incorporated by reference from Exhibit 4.2 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.3	Form of Warrant of Organovo, Inc. issued to former holders of Organovo, Inc. promissory notes (incorporated by reference from Exhibit 4.3 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.4	Form of Investor Warrant of Organovo Holdings, Inc. (incorporated by reference from Exhibit 4.4 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.5(i)	Form of Warrant of Organovo Holdings, Inc. (\$1.00 exercise price) issued to Placement Agent (incorporated by reference from Exhibit 4.2(i) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
4.5(ii)	Form of Warrant of Organovo, Inc. (\$1.00 exercise price) issued to Selling Agent (incorporated by reference from Exhibit 4.2(ii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012 )
4.5(iii)	Form of Warrant of Organovo Holdings, Inc. (\$1.00 exercise price) issued to Placement Agent in exchange for Organovo, Inc. warrant issued to Selling Agent (incorporated by reference from Exhibit 4.2(iii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)

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- 4.5 Form of Warrant of Organovo Holdings, Inc. issued to former holders of Organovo, Inc. promissory notes (incorporated by reference from Exhibit 4.5 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 4.6 Form of New Bridge Warrant (incorporated by reference from Exhibit 4.6 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 4.7 Form of Lock-Up Agreement (incorporated by reference from Exhibit 4.7 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 5.1 Opinion of DLA Piper LLP (US) as to the validity of the shares of Organovo Holdings, Inc. common stock to be issued.\*
- 10.1 Form of Securities Purchase Agreement between Organovo, Inc and the Bridge Investors (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.2 Escrow Agreement, by and among Organovo, Inc., the Selling Agent and Signature Bank (incorporated by reference from Exhibit 10.6 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.3 Selling Agent Agreement between Organovo, Inc. and the Selling Agent (incorporated by reference from Exhibit 10.3 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.4 Form of Subscription Agreement, by and between Organovo Holdings, Inc. and the investors in the offering (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012 Form 8-K)
- 10.5 Form of Registration Rights Agreement, by and between Organovo Holdings, Inc. and the investors in the offering (incorporated by reference from Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.6 Escrow Agreement, by and among Organovo, Inc., the Placement Agent and Signature Bank (incorporated by reference from Exhibit 10.51 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.6(i) Extension to Escrow Agreement (incorporated by reference from Exhibit 10.5(iii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.7(i) Joinder by Organovo Holdings, Inc. to Placement Agency Agreement (incorporated by reference from Exhibit 10.4(ii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.7(ii) Joinder by Organovo Holdings, Inc. to Escrow Agreement (incorporated by reference from Exhibit 10.5(ii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.8 Placement Agent Agreement between Organovo, Inc. and the Placement Agent (incorporated by reference from Exhibit 10.4(i) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.8(i) Extension to Placement Agent Agreement (incorporated by reference from Exhibit 10.4(iii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.9 Split-Off Agreement, by and among Organovo Holdings, Inc., Organovo Split Corp., Deborah Lovig and James Coker (incorporated by reference from Exhibit 10.9 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.10 General Release Agreement by and among Organovo Holdings, Inc., Organovo Split Corp., Deborah Lovig and James Coker (incorporated by reference from Exhibit 10.10 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.11 Form of Share Cancellation Agreement and Release (incorporated by reference from Exhibit 10.11 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.12 Offer Letter between Barry D. Michaels and Organovo, Inc. \*\*\* (incorporated by reference from Exhibit 10.12 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.13 Offer Letter between Sharon Collins Presnell and Organovo, Inc. \*\*\* (incorporated by reference from Exhibit 10.13 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.14 Organovo, Inc. 2008 Equity Incentive Plan \*\*\* (incorporated by reference from Exhibit 10.14 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.15 Organovo Holdings, Inc. 2012 Equity Incentive Plan\*\*\* (incorporated by reference from Exhibit 10.15 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.16 Form of Stock Option Award Agreement under the 2012 Equity Incentive Plan \*\*\* (incorporated by reference from Exhibit 10.16 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)

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10.17	Form of Indemnification Agreement *** (incorporated by reference from Exhibit 10.17 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
10.18	Memorandum of Understanding between Organovo, Inc. and Robert Baltera, Jr. *** (incorporated by reference from Exhibit 10.18 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
10.19	Scientific Advisory Board Consulting Agreement, dated as of March 17, 2008, by and between Organovo, Inc. and Glenn Prestwich, Ph.D. (incorporated by reference from Exhibit 10.19 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
10.20	Scientific Advisory Board Consulting Agreement, dated as of March 17, 2008, by and between Organovo, Inc. and David Mooney, Ph.D. (incorporated by reference from Exhibit 10.20 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
10.21	Scientific Advisory Board Consulting Agreement, dated as of April 14, 2008, by and between Organovo, Inc. and Gordana Vunjak-Novakovic (incorporated by reference from Exhibit 10.21 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
10.22	Scientific Advisory Board Consulting Agreement, dated as of June 30, 2008, by and between Organovo, Inc. and K. Craig Kent, M.D. (incorporated by reference from Exhibit 10.22 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
10.23	License Agreement dated as of March 24, 2009, by and between Organovo, Inc. and the Curators of the University of Missouri, **** (incorporated by reference from Exhibit 10.23 to the Company's Current Report on Form 8-K, as filed with the SEC on May 15, 2012)
10.24	License Agreement dated as of March 12, 2010 by and between the Company and the University of Missouri, **** (incorporated by reference from Exhibit 10.24 to the Company's Current Report on Form 8-K, as filed with the SEC on May 15, 2012)
10.25	License Agreement dated as of May 2, 2011, by and between the Company and Clemson University Research Foundation, **** (incorporated by reference from Exhibit 10.25 to the Company's Current Report on Form 8-K, as filed with the SEC on May 15, 2012)
10.26	3D Bio-Printer Development Program Agreement, dated as of March 3, 2011, by and between Invetech Pty Ltd ("Invetech") and Organovo Holdings, Inc. (incorporated by reference from Exhibit 10.25 to the Company's Current Report on Form 8-K/A, as filed with the SEC on March 30, 2012) ****
21.1	Subsidiaries of Organovo Holdings, Inc. (incorporated by reference from Exhibit 10.25 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
23.1	Consent of Independent Registered Public Accounting Firm*
23.2	Consent of DLA Piper LLP (US) (included in Exhibit 5.1)*
24.1	Power of Attorney (included on signature page hereto)*
101†	Interactive Data File

\* Filed herewith

\*\* To be filed by amendment.

\*\*\* Designates management contracts and compensation plans.

\*\*\*\* This Exhibit has been filed separately with the Secretary of the Securities and Exchange Commission without the redaction pursuant to a Confidential Treatment Request under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

† The interactive data files were previously furnished with the Form S-1 on June 13, 2012 (Registration No. 333-182101). Since no changes have been made to the financial statements or Notes to Financial Statements since the initial Form S-1 was filed, no new interactive data files are required for this amendment filing.

Certain Confidential Information contained in this Exhibit was omitted by means of redacting a portion of the text and replacing it with an asterisk.

### **(b) Financial Statements Schedules.**

All financing statements schedules are omitted because they are not applicable or the required information is shown in the consolidated financial statements or other notes hereto.

### **Item 17. Undertakings.**

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by section 10(a)(3) of the Securities Act of 1933 (the "Securities Act");

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment

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thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

**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: July 5, 2012

By: /s/ Keith Murphy  
Name: Keith Murphy  
Title: Chief Executive Officer

**Power of Attorney**

We, the undersigned officers and directors of Organovo Holdings, Inc., hereby severally constitute and appoint Keith Murphy and Barry D. Michaels, and both or any one of them, our true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution in each of them for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing necessary or desirable to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Keith Murphy</u> <b>Keith Murphy</b>	Chairman of the Board, Chief Executive Officer, and President (Principal Executive Officer)	July 5, 2012
<u>/s/ Barry D. Michaels</u> <b>Barry D. Michaels</b>	Chief Financial Officer (Principal Financial and Accounting Officer)	July 5, 2012
<u>/s/ Robert Baltera, Jr.</u> <b>Robert Baltera, Jr.</b>	Director	July 5, 2012
<u>/s/ Andras Forgacs</u> <b>Andras Forgacs</b>	Director	July 5, 2012
<u>/s/ Adam K. Stern</u> <b>Adam K. Stern</b>	Director	July 5, 2012

**EXHIBIT INDEX**

<b>Exhibit No.</b>	<b>Description</b>
2.1	Agreement and Plan of Merger and Reorganization, dated as of February 8, 2012, by and among Organovo Holdings, Inc. a Delaware corporation, Organovo Acquisition Corp., a Delaware corporation and Organovo, Inc., a Delaware corporation (incorporated by reference from Exhibit 2.1 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
2.2	Certificate of Merger as filed with the Delaware Secretary of State effective February 8, 2012 (incorporated by reference from Exhibit 2.2 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
2.3	Articles of Merger as filed with the Nevada Secretary of State effective December 28, 2011 (incorporated by reference from Exhibit 2.1 to the Company's Current Report on Form 8-K, as filed with the Securities and Exchange Commission (the "SEC") on February 3, 2012 (the "February 2012 Form 8-K")
2.4	Agreement and Plan of Merger, dated as of December 28, 2011, by and between Real Estate Restoration and Rental, Inc. and Organovo Holdings, Inc. (incorporated by reference from Exhibit 2.2 to the Company's Current Report on Form 8-K, as filed with the SEC on January 4, 2012)
2.5	Certificate of Merger as filed with the Delaware Secretary of State effective January 30, 2012 (incorporated by reference from Exhibit 2.3 to the February 2012 Form 8-K)
2.6	Agreement and Plan of Merger, dated as of January 30, 2012, by and between Organovo Holdings, Inc. (Nevada) and Organovo Holdings, Inc. (Delaware) (incorporated by reference from Exhibit 2.2 to the February 2012 Form 8-K)
2.7	Articles of Merger as filed with the Nevada Secretary of State effective January 30, 2012 (incorporated by reference from Exhibit 2.4 to the February 2012 Form 8-K)
3.1(i)	Articles of Incorporation of Real Estate Restoration and Rental, Inc. (incorporated by reference from Exhibit 3.1 to the Company's registration statement (SEC File No. 333-169928) on Form S-1, as filed with the SEC on October 13, 2010
3.1(ii)	Certificate of Incorporation, Certificate of Change of Registered Agent and/or Registered Office, Certificate of Correction, and Certificate of Amendment of Certificate of Incorporation, each of Organovo, Inc., as filed with the Secretary of State of the State of Delaware on April 19, 2007, January 30, 2009, July 29, 2010, and September 28, 2011 respectively (incorporated by reference from Exhibit 10.25 to the Company's Current Report on Form 8-K/A, as filed with the SEC on March 30, 2012)
3.1(iii)	Certificate of Incorporation of Organovo Holdings, Inc. (Delaware) (incorporated by reference from Exhibit 3.1 to the February 2012 Form 8-K)
3.2	Bylaws of Organovo Holdings, Inc. (Delaware) (incorporated by reference from Exhibit 3.2 to the February 2012 Form 8-K)
4.1	Form of Bridge Warrant of Organovo, Inc. (incorporated by reference from Exhibit 4.1 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.2	Form of Bridge Promissory Note of Organovo, Inc. (incorporated by reference from Exhibit 4.2 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.3	Form of Warrant of Organovo, Inc. issued to former holders of Organovo, Inc. promissory notes (incorporated by reference from Exhibit 4.3 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.4	Form of Investor Warrant of Organovo Holdings, Inc. (incorporated by reference from Exhibit 4.4 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.5(i)	Form of Warrant of Organovo Holdings, Inc. (\$1.00 exercise price) issued to Placement Agent (incorporated by reference from Exhibit 4.2(i) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
4.5(ii)	Form of Warrant of Organovo, Inc. (\$1.00 exercise price) issued to Selling Agent (incorporated by reference from Exhibit 4.2(ii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012 )
4.5(iii)	Form of Warrant of Organovo Holdings, Inc. (\$1.00 exercise price) issued to Placement Agent in exchange for Organovo, Inc. warrant issued to Selling Agent (incorporated by reference from Exhibit 4.2(iii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
4.5	Form of Warrant of Organovo Holdings, Inc. issued to former holders of Organovo, Inc. promissory notes (incorporated by reference from Exhibit 4.5 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.6	Form of New Bridge Warrant (incorporated by reference from Exhibit 4.6 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
4.7	Form of Lock-Up Agreement (incorporated by reference from Exhibit 4.7 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)

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- 5.1 Opinion of DLA Piper LLP (US) as to the validity of the shares of Organovo Holdings, Inc. common stock to be issued.\*
- 10.1 Form of Securities Purchase Agreement between Organovo, Inc and the Bridge Investors (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.2 Escrow Agreement, by and among Organovo, Inc., the Selling Agent and Signature Bank (incorporated by reference from Exhibit 10.6 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.3 Selling Agent Agreement between Organovo, Inc. and the Selling Agent (incorporated by reference from Exhibit 10.3 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.4 Form of Subscription Agreement, by and between Organovo Holdings, Inc. and the investors in the offering (incorporated by reference from Exhibit 10.1 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012 Form 8-K)
- 10.5 Form of Registration Rights Agreement, by and between Organovo Holdings, Inc. and the investors in the offering (incorporated by reference from Exhibit 10.2 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.6 Escrow Agreement, by and among Organovo, Inc., the Placement Agent and Signature Bank (incorporated by reference from Exhibit 10.51 to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.6(i) Extension to Escrow Agreement (incorporated by reference from Exhibit 10.5(iii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.7(i) Joinder by Organovo Holdings, Inc. to Placement Agency Agreement (incorporated by reference from Exhibit 10.4(ii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.7(ii) Joinder by Organovo Holdings, Inc. to Escrow Agreement (incorporated by reference from Exhibit 10.5(ii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.8 Placement Agent Agreement between Organovo, Inc. and the Placement Agent (incorporated by reference from Exhibit 10.4(i) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.8(i) Extension to Placement Agent Agreement (incorporated by reference from Exhibit 10.4(iii) to the Company's Current Report on Form 8-K, as filed with the SEC on March 16, 2012)
- 10.9 Split-Off Agreement, by and among Organovo Holdings, Inc., Organovo Split Corp., Deborah Lovig and James Coker (incorporated by reference from Exhibit 10.9 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.10 General Release Agreement by and among Organovo Holdings, Inc., Organovo Split Corp., Deborah Lovig and James Coker (incorporated by reference from Exhibit 10.10 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.11 Form of Share Cancellation Agreement and Release (incorporated by reference from Exhibit 10.11 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.12 Offer Letter between Barry D. Michaels and Organovo, Inc. \*\*\* (incorporated by reference from Exhibit 10.12 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.13 Offer Letter between Sharon Collins Presnell and Organovo, Inc. \*\*\* (incorporated by reference from Exhibit 10.13 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.14 Organovo, Inc. 2008 Equity Incentive Plan \*\*\* (incorporated by reference from Exhibit 10.14 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.15 Organovo Holdings, Inc. 2012 Equity Incentive Plan\*\*\* (incorporated by reference from Exhibit 10.15 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.16 Form of Stock Option Award Agreement under the 2012 Equity Incentive Plan \*\*\* (incorporated by reference from Exhibit 10.16 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.17 Form of Indemnification Agreement \*\*\* (incorporated by reference from Exhibit 10.17 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.18 Memorandum of Understanding between Organovo, Inc. and Robert Baltera, Jr. \*\*\* (incorporated by reference from Exhibit 10.18 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
- 10.19 Scientific Advisory Board Consulting Agreement, dated as of March 17, 2008, by and between Organovo, Inc. and Glenn Prestwich, Ph.D. (incorporated by reference from Exhibit 10.19 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)

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10.20	Scientific Advisory Board Consulting Agreement, dated as of March 17, 2008, by and between Organovo, Inc. and David Mooney, Ph.D. (incorporated by reference from Exhibit 10.20 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
10.21	Scientific Advisory Board Consulting Agreement, dated as of April 14, 2008, by and between Organovo, Inc. and Gordana Vunjak-Novakovic (incorporated by reference from Exhibit 10.21 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
10.22	Scientific Advisory Board Consulting Agreement, dated as of June 30, 2008, by and between Organovo, Inc. and K. Craig Kent, M.D. (incorporated by reference from Exhibit 10.22 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
10.23	License Agreement dated as of March 24, 2009, by and between Organovo, Inc. and the Curators of the University of Missouri, **** (incorporated by reference from Exhibit 10.23 to the Company's Current Report on Form 8-K, as filed with the SEC on May 15, 2012)
10.24	License Agreement dated as of March 12, 2010 by and between the Company and the University of Missouri, **** (incorporated by reference from Exhibit 10.24 to the Company's Current Report on Form 8-K, as filed with the SEC on May 15, 2012)
10.25	License Agreement dated as of May 2, 2011, by and between the Company and Clemson University Research Foundation, **** (incorporated by reference from Exhibit 10.25 to the Company's Current Report on Form 8-K, as filed with the SEC on May 15, 2012)
10.26	3D Bio-Printer Development Program Agreement, dated as of March 3, 2011, by and between Invetech Pty Ltd ("Invetech") and Organovo Holdings, Inc. (incorporated by reference from Exhibit 10.25 to the Company's Current Report on Form 8-K/A, as filed with the SEC on March 30, 2012) ****
21.1	Subsidiaries of Organovo Holdings, Inc. (incorporated by reference from Exhibit 10.25 to the Company's Current Report on Form 8-K, as filed with the SEC on February 13, 2012)
23.1	Consent of Independent Registered Public Accounting Firm*
23.2	Consent of DLA Piper LLP (US) (included in Exhibit 5.1)*
24.1	Power of Attorney (included on signature page hereto)*
101†	Interactive Data File

\* Filed herewith

\*\* To be filed by amendment.

\*\*\* Designates management contracts and compensation plans.

\*\*\*\* This Exhibit has been filed separately with the Secretary of the Securities and Exchange Commission without the redaction pursuant to a Confidential Treatment Request under Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

† The interactive data files were previously furnished with the Form S-1 on June 13, 2012 (Registration No. 333-182101). Since no changes have been made to the financial statements or Notes to Financial Statements since the initial Form S-1 was filed, no new interactive data files are required for this amendment filing.

Certain Confidential Information contained in this Exhibit was omitted by means of redacting a portion of the text and replacing it with an asterisk.



**EXHIBIT 5.1**

DLA Piper LLP (US)  
4365 Executive Drive, Suite 1100  
San Diego, California 92121  
www.dlapiper.com

**T** 858.677.1400

**F** 858.677.1401

July 5, 2012

Organovo Holdings, Inc.  
5871 Oberlin Drive, Suite 150,  
San Diego, California 92121

**Re: Registration Statement on Form S-1  
Relating to 31,995,974 Shares of Common Stock**

Ladies and Gentlemen:

We have acted as counsel to Organovo Holdings, Inc., a Delaware corporation (the "Company"), in connection with the filing on the date hereof of a registration statement on Form S-1 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"). The Registration Statement relates to the registration of up to 32,095,974 shares (including 16,747,987 shares that may be acquired upon exercise of certain warrants) of the Company's common stock, par value \$0.001 per share (the "Shares"), that the Registration Statement contemplates will be sold by certain selling security holders.

We have examined all instruments, documents and records which we deemed relevant and necessary for the basis of our opinion hereinafter expressed. In such examination, we have assumed the genuineness of all signatures and the authenticity of all documents submitted to us as originals and the conformity to the originals of all documents submitted to us as copies. We express no opinion concerning any law other than the corporation law of the State of Delaware and the federal law of the United States.

Based upon and subject to the foregoing, we are of the opinion that the Shares that are being offered by the selling security holders have been duly authorized and are, or upon proper exercise of the warrants in accordance with their terms, will be, validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and the reference to us under the caption "Interest of Named Experts and Counsel" in the prospectus included in the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

This opinion letter is given to you solely for use in connection with the registration for resale of the Shares in accordance with the prospectus included in the Registration Statement and is not to be relied upon for any other purpose. Our opinion is expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Shares or the Registration Statement.

Very truly yours,

/s/ DLA Piper LLP (US)

**DLA Piper LLP (US)**



**Mayer Hoffman McCann P.C.**

An Independent CPA Firm

10616 Scripps Summit Court

San Diego, California 92131

858-795-2000 ph

858-795-2001 fx

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**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the inclusion in this Amendment No. 1 to Registration Statement No. 333-182101 on Form S-1 of our report dated March 30, 2012, with respect to the financial statements of Organovo, Inc., appearing in the Current Report on Form 8-K/A of Organovo Holdings, Inc. for the year ended December 31, 2011 and for the period from Inception (April 19, 2007) through December 31, 2011, and to the reference to us under the heading "Experts" in this Registration Statement.

/s/ Mayer Hoffman McCann P.C.

San Diego, California

July 5, 2012