# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**Washington, DC 20549**

# Form 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the quarterly period ended December 31, 2017**

**OR**

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from _____ to _____**

**Commission File Number 001-35996**

# Organovo Holdings, Inc.
**(Exact name of registrant as specified in its charter)**

| **Delaware** | **27-1488943** |
|---|---|
| **(State or other jurisdiction of incorporation or organization)** | **(I.R.S. Employer Identification No.)** |
| **6275 Nancy Ridge Drive, Suite 110, San Diego, CA 92121** | **(858) 224-1000** |
| **(Address of principal executive offices and zip code)** | **(Registrant's telephone number, including area code)** |

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

| | | | |
|---|---|---|---|
| Large accelerated filer | ☐ | Accelerated filer | ☒ |
| Non-accelerated filer | ☐ (Do not check if a smaller reporting company) | Smaller reporting company | ☐ |
| | | Emerging growth company | ☐ |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of February 1, 2018, a total of 110,835,973 shares of the registrant's Common Stock, $0.001 par value, were outstanding.

**ORGANOVO HOLDINGS, INC.**

**INDEX**

## PART I—FINANCIAL INFORMATION

### ITEM 1. FINANCIAL STATEMENTS

**Organovo Holdings, Inc.**
**Condensed Consolidated Balance Sheets**
**(in thousands except for share data)**

| | December 31, 2017 (Unaudited) | March 31, 2017 (Audited) |
|---|---|---|
| **Assets** | | |
| **Current Assets** | | |
| Cash and cash equivalents | $ 47,338 | $ 62,751 |
| Accounts receivable | 1,174 | 647 |
| Grant receivable | 260 | - |
| Inventory, net | 605 | 550 |
| Prepaid expenses and other current assets | 891 | 1,144 |
| Total current assets | 50,268 | 65,092 |
| Fixed assets, net | 2,978 | 3,840 |
| Restricted cash | 127 | 127 |
| Other assets, net | 181 | 121 |
| Total assets | $ 53,554 | $ 69,180 |
| **Liabilities and Stockholders' Equity** | | |
| **Current Liabilities** | | |
| Accounts payable | $ 452 | $ 1,171 |
| Accrued expenses | 2,808 | 4,101 |
| Deferred revenue | 857 | 582 |
| Deferred rent | 180 | 157 |
| Total current liabilities | 4,297 | 6,011 |
| Deferred revenue, net of current portion | 43 | 58 |
| Deferred rent, net of current portion | 613 | 749 |
| Total liabilities | 4,953 | 6,818 |
| **Commitments and Contingencies (Note 3)** | | |
| **Stockholders' Equity** | | |
| Common stock, $0.001 par value; 150,000,000 shares authorized, 109,322,626 and 104,551,466 shares issued and outstanding at December 31, 2017 and March 31, 2017, respectively | 109 | 104 |
| Additional paid-in capital | 275,176 | 261,586 |
| Accumulated deficit | (226,671) | (199,317) |
| Accumulated other comprehensive income (loss) | (13) | (11) |
| Total stockholders' equity | 48,601 | 62,362 |
| **Total Liabilities and Stockholders' Equity** | $ 53,554 | $ 69,180 |

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

**Organovo Holdings, Inc.**
**Unaudited Condensed Consolidated Statements of Operations and Other Comprehensive Loss**
**(in thousands except share and per share data)**

| | Three Months Ended December 31, 2017 | Three Months Ended December 31, 2016 | Nine Months Ended December 31, 2017 | Nine Months Ended December 31, 2016 |
|---|---|---|---|---|
| **Revenues** | | | | |
| Products and services | $ 832 | $ 699 | $ 2,722 | $ 2,396 |
| Collaborations and licenses | 61 | 443 | 367 | 1,001 |
| Grants | 260 | 9 | 409 | 21 |
| **Total Revenues** | 1,153 | 1,151 | 3,498 | 3,418 |
| | | | | |
| Cost of revenues | 192 | 212 | 747 | 773 |
| Research and development expenses | 4,005 | 5,024 | 13,982 | 14,012 |
| Selling, general and administrative expenses | 4,865 | 5,546 | 16,457 | 16,520 |
| Total costs and expenses | 9,062 | 10,782 | 31,186 | 31,305 |
| **Loss from Operations** | (7,909) | (9,631) | (27,688) | (27,887) |
| **Other Income (Expense)** | | | | |
| Change in fair value of warrant liabilities | — | 1 | — | (4) |
| Interest income | 118 | 50 | 334 | 124 |
| **Total Other Income (Expense)** | 118 | 51 | 334 | 120 |
| **Income Tax Expense** | — | (1) | — | (23) |
| **Net Loss** | $ (7,791) | $ (9,581) | $ (27,354) | $ (27,790) |
| **Currency Translation Adjustment** | $ (2) | $ (3) | $ (2) | $ (10) |
| **Comprehensive Loss** | $ (7,793) | $ (9,584) | $ (27,356) | $ (27,800) |
| Net loss per common share—basic and diluted | $ (0.07) | $ (0.09) | $ (0.26) | $ (0.29) |
| Weighted average shares used in computing net loss per common share—basic and diluted | 107,345,623 | 101,174,734 | 106,107,721 | 95,595,640 |

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

**Organovo Holdings, Inc.**
**Unaudited Condensed Consolidated Statements of Cash Flows**
**(in thousands)**

| | Nine Months Ended December 31, 2017 | Nine Months Ended December 31, 2016 |
|---|---|---|
| **Cash Flows From Operating Activities** | | |
| Net loss | $ (27,354) | $ (27,790) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 962 | 824 |
| Change in fair value of warrant liabilities | — | 4 |
| Stock-based compensation | 5,600 | 5,540 |
| Increase (decrease) in cash resulting from changes in: | | |
| Accounts receivable | (527) | (771) |
| Grants receivable | (260) | — |
| Inventory | (55) | 6 |
| Prepaid expenses and other assets | 253 | 400 |
| Accounts payable | (719) | (65) |
| Accrued expenses | (1,293) | 486 |
| Deferred rent | (113) | (103) |
| Deferred revenue | 260 | (490) |
| **Net cash used in operating activities** | (23,246) | (21,959) |
| **Cash Flows From Investing Activities** | | |
| Restricted cash deposits | — | (48) |
| Purchases of fixed assets | (90) | (1,061) |
| Purchases of intangible assets | (70) | — |
| **Net cash used in investing activities** | (160) | (1,109) |
| **Cash Flows From Financing Activities** | | |
| Proceeds from issuance of common stock and exercise of warrants, net | 7,169 | 30,401 |
| Proceeds from exercise of stock options | 826 | 582 |
| **Net cash provided by financing activities** | 7,995 | 30,983 |
| **Effect of currency exchange rate changes on cash and cash equivalents** | (2) | (10) |
| **Net Increase (Decrease) in Cash and Cash Equivalents** | (15,413) | 7,905 |
| **Cash and Cash Equivalents at Beginning of Period** | 62,751 | 62,091 |
| **Cash and Cash Equivalents at End of Period** | $ 47,338 | $ 69,996 |
| **Supplemental Disclosure of Cash Flow Information:** | | |
| Interest paid | $ — | $ — |
| Income taxes paid | $ — | $ 23 |

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

## Note 1. Description of Business and Summary of Significant Accounting Policies

### *Nature of operations and basis of presentation*

References in these notes to the unaudited condensed consolidated financial statements to "Organovo Holdings, Inc.," "Organovo Holdings," "we," "us," "our," "the Company" and "our Company" refer to Organovo Holdings, Inc. and its consolidated subsidiaries. Our consolidated financial statements include the accounts of the Company as well as its wholly-owned subsidiaries, with all material intercompany accounts and transactions eliminated in consolidation. In December 2014, we established a wholly-owned subsidiary, Samsara Sciences, Inc., to focus on the acquisition and curation of qualified cells in support of our commercial and research endeavors. In September 2015, we established another wholly-owned subsidiary in the United Kingdom, Organovo U.K., Ltd., for the primary purpose of establishing a sales presence in Europe.

Since its inception, the Company has devoted its efforts primarily to developing and commercializing a proprietary platform technology to produce and study living tissues that emulate key aspects of human biology and disease, raising capital and building infrastructure. We provide client access to our proprietary ExVive™ tissue platform to facilitate drug discovery and development through a range of research services, collaborative agreements, licenses, and grants. We also are applying our therapeutic tissue expertise to progress multiple Investigational New Drug ("IND") Application track therapeutic programs, focusing on critical unmet medical needs in the liver disease space, including our lead program for NovoTissues® targeting Alpha-1 antitrypsin deficiency, for which we have received orphan drug designation ("ODD") from the Food and Drug Administration ("FDA").

The Company's activities are subject to significant risks and uncertainties including failing to successfully develop products and services based on its technology, failing to achieve regulatory approvals for its therapeutic candidates, and failing to achieve the market acceptance necessary to generate sufficient revenues to support its operations and to achieve and sustain profitability.

The accompanying interim condensed consolidated 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, stockholders' equity and cash flows in accordance with generally accepted accounting principles ("GAAP"). The balance sheet at March 31, 2017 is derived from the Company's 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 the Company's financial position, results of operations, stockholders' equity and cash flows. These financial statements should be read in conjunction with the financial statements included in the Company's Annual Report on Form 10-K for the year ended March 31, 2017, filed with the Securities and Exchange Commission (the "SEC") on June 7, 2017. Operating results for interim periods are not necessarily indicative of operating results for the Company's fiscal year ending March 31, 2018.

### *Liquidity*

As of December 31, 2017, the Company had cash and cash equivalents of approximately $47.3 million and an accumulated deficit of approximately $226.7 million. The Company also had negative cash flows from operations of approximately $23.2 million during the nine months ended December 31, 2017.

Through December 31, 2017, the Company has financed its operations primarily through the sale of convertible notes, the private placement of equity securities, the sale of common stock through public and at-the-market ("ATM") offerings, and through revenue derived from product and research service-based agreements, collaborative agreements, grants, and licenses. During the nine months ended December 31, 2017, the Company issued 3,793,758 shares of its common stock through its ATM facility and received net proceeds of approximately $7.1 million.

Based on its current operating plan and available cash resources, the Company has sufficient resources to fund its business for at least the next twelve months from the financial statement issuance date.

The Company will need additional capital to further fund the development and commercialization of its proprietary platform to produce and study living tissues that emulate key aspects of human biology and disease that can be used to facilitate drug discovery and development, as well as its therapeutic tissues focusing on critical unmet medical needs in the liver disease space. The Company intends to cover its future operating expenses through cash on hand, through revenue derived from research service agreements, product sales, collaborative agreements, grants and license payments, and through the issuance of additional equity or debt securities. Depending on market conditions, the Company cannot be sure that additional financing will be available when needed or that, if available, financing will be obtained on terms favorable to it or to its stockholders.

Having insufficient funds may require us to delay, scale back, or eliminate some or all of our development programs or relinquish rights to our technology on less favorable terms than we would otherwise choose. Failure to obtain adequate financing could eventually adversely affect our ability to operate as a going concern. If we continue to raise additional funds from the issuance of equity securities, there will be substantial dilution to our existing stockholders. 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.

***Use of estimates***

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 condensed consolidated financial statements include those assumed in revenue recognized under the proportional performance model, the valuation of stock-based compensation expense, and the valuation allowance on deferred tax assets.

***Fair value measurement***

The Company had issued warrants, of which some were classified as derivative liabilities as a result of the terms in the warrants that provide for down round protection in the event of a dilutive issuance. The Company used Level 3 inputs (unobservable inputs that are supported by little or no market activity, and that are significant to the fair value of the assets or liabilities) 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. The Company’s derivative liabilities were adjusted to reflect estimated fair value at each period end, with any increase or decrease in the estimated fair value being recorded in other income or expense accordingly, as adjustments to the fair value of the derivative liabilities. Various factors are considered in the pricing models the Company used to value the warrants, including the Company’s current stock price, the remaining life of the warrant, the volatility of the Company’s stock price, and the risk-free interest rate. The remaining warrants expired as of March 31, 2017 and were removed from the Balance Sheet.

***Revenue recognition***

The Company’s revenues are derived from research service agreements, product sales, and collaborative agreements with pharmaceutical and biotechnology companies, grants from the National Institutes of Health (“NIH”) and private not-for-profit organizations, and license-payments from academic institutions.

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.

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, 2017 and March 31, 2017, the Company had approximately $900,000 and $640,000, respectively, in deferred revenue related to its licenses, collaborative agreements, and research service agreements.

***Revenue arrangements with multiple deliverables***

The Company follows ASC 605-25 *Revenue Recognition – Multiple-Element Arrangements* for 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 vendor-specific objective evidence ("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.

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 periodically receives 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.

***Revenue from research service agreements***

For research service agreements that contain only a single or primary deliverable, the Company defers any up-front fees collected from customers, and recognizes revenue for the delivered element only when it determines there are no uncertainties regarding customer acceptance. For agreements that contain multiple deliverables, the Company follows ASC 605-25 as described above.

***Research and development revenue under collaborative agreements***

The Company's collaboration revenue consists of license and collaboration agreements that contain multiple elements, which may include non-refundable up-front 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.

The Company recognizes revenue from research funding under collaboration agreements when earned on a "proportional performance" basis as research services are provided or substantive milestones are achieved. We recognize revenue that is contingent upon the achievement of a substantive milestone in its entirety in the period in which the milestone is achieved. A milestone is considered substantive when the consideration payable to us for the milestone (i) is consistent with our performance necessary to achieve the milestone or the increase in value to the collaboration resulting from our performance, (ii) relates solely to our past performance and (iii) is reasonable relative to all of the other deliverables and payments within the arrangement. In making this assessment, we consider all facts and circumstances relevant to the arrangement, including factors such as the risks that must be overcome to achieve the milestone, the level of effort and investment required to achieve the milestone and whether any portion of the milestone consideration is related to future performance or deliverables.

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, using the appropriate method of revenue recognition based on its analysis of the related contractual element(s).

In November 2014, the Company entered into a collaborative non-exclusive research affiliation with a university medical school and a non-profit medical charity, under which the Company received a one-time grant from the charity towards the placement of a NovoGen Bioprinter at the university for the purpose of developing bioprinted tissues for surgical transplantation research. The Company has recorded $0 and $7,000 for the three months ended December 31, 2017 and 2016 and $0 and $32,000 for the nine months ended December 31, 2017 and 2016, respectively, in revenue related to this collaboration in recognition of the proportional performance achieved. The Company has completed its obligations under this agreement as of November 30, 2016.

In April 2015, the Company entered into a research collaboration agreement with a third party to develop custom tissue models for fixed fees. Based on the proportional performance achieved under this agreement, $0 and $150,000 in collaboration revenue was recorded for the three and nine months ended December 31, 2017, respectively, and $117,000 in collaboration revenue was recorded

for the three and nine months ended December 31, 2016. Approximately $620,000 in collaboration revenue has been recognized to date under this agreement as of December 31, 2017. The Company has completed its obligations under this agreement as of September 30, 2017.

Also in April 2015, the Company entered into a multi-year research agreement with a third party to develop multiple custom tissue models for use in drug development. Approximately $0 and $0 were recorded as revenue in recognition of the proportional performance achieved under this agreement during the three and nine months ended December 31, 2017, respectively. Approximately $302,000 and $835,000 were recorded as revenue in recognition of the proportional performance achieved under this agreement during the three and nine months ended December 31, 2016, respectively.

In June 2016, the Company announced it had entered into another collaborative non-exclusive research affiliation with a university medical school and a non-profit medical charity, under which the Company received a one-time grant from the charity towards the placement of a NovoGen Bioprinter at the university for the purpose of developing bioprinted tissues for skeletal disease research. The Company received an up-front payment in June 2016, which was initially recorded as deferred revenue. Revenue of $18,000 and $53,000 has been recorded under this agreement during the three and nine months ended December 31, 2017, respectively. Revenue of $17,000 has been recorded under this agreement during the three and nine months ended December 31, 2016.

In December 2016, the Company signed another collaborative non-exclusive research affiliation with a university medical school and a non-profit medical charity, under which the Company received a one-time grant from the charity towards the placement of a NovoGen Bioprinter at the university for the purpose of developing an architecturally correct kidney for potential therapeutic applications. The Company received an up-front payment in January and March of 2017, which has been recorded as deferred revenue. Revenue of $10,000 and $29,000 has been recorded under this agreement for the three and nine months ended December 31, 2017, respectively. No revenue had been recorded under this agreement during the three and nine months ended December 31, 2016, respectively, as the printer had not yet been installed at the university as of December 31, 2016.

In April 2017, the Company signed a collaborative non-exclusive research affiliation with a university, under which the Company received a one-time non-refundable payment toward the placement of a NovoGen Bioprinter at the university for the purpose of specific research projects mutually agreed upon by the university and the Company in the field of volumetric muscle loss. The Company received an up-front payment in May of 2017, which has been recorded as deferred revenue. Revenue of approximately $14,000 and $28,000 has been recorded under this agreement for the three and nine months ended December 31, 2017, respectively, beginning subsequent to the installation of the printer in July of 2017. In addition, during April of 2017, the Company signed a non-exclusive patent license agreement with the university including an annual fee of $75,000 for each of the two years for the license to the Company Patents for research use limited to the field of volumetric muscle loss. The Company received the first annual payment of $75,000 in April of 2017, which was initially recorded as deferred revenue. Revenue of $18,750 and $56,250 has been recorded under this agreement for the three and nine months ended December 31, 2017.

In September 2017, the Company entered into an agreement with a company, under which the Company received a one-time non-refundable payment of $50,000 for limited use of a Company patent in reference to four bioprinters developed and placed at research and academic facilities. The Company has recorded $0 and $50,000 in revenue for the three months and nine months ended December 31, 2017, respectively.

***Product revenue***

The Company recognizes product revenue at the time of delivery to the customer, provided all other revenue recognition criteria have been met.

We expect to establish a reserve for estimated product returns that will be recorded as a reduction to revenue. This 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.

***Grant revenue***

During August 2013, the Company was awarded a research grant by a private, not-for-profit organization for up to $251,700, contingent on go/no-go decisions made by the grantor at the completion of each stage of research as outlined in the grant award. Revenues from the grant are based upon internal costs incurred that are specifically covered by the grant, plus an additional rate that provides funding for overhead expenses. Revenue is recognized when the Company incurs expenses that are related to the grant. Revenue recognized under this grant was approximately $0 and $9,000 for the three months ended December 31, 2017 and 2016,

respectively, and $0 and $21,000 for the nine months ended December 31, 2017 and 2016, respectively. The Company has completed its obligations under this agreement as of March 31, 2017.

During July 2017, the NIH awarded the Company a research grant totaling approximately $1,657,000. The grant provides for fixed payments based on the achievement of certain milestones. Revenue is recognized upon completion of substantive milestones. Revenue recognized under this grant was approximately $260,000 and $409,000 for the three and nine months ended December 31, 2017, respectively.

***Cost of revenues***

The Company reported approximately $0.2 million and $0.7 million in cost of revenues for the three and nine months ended December 31, 2017, respectively. The Company reported approximately $0.2 million and $0.8 million in cost of revenues for the three and nine months ended December 31, 2016, respectively. Cost of revenues consists of our costs related to manufacturing and delivering our product and service revenue.

***Net loss per share***

Basic and diluted net loss per share has been computed using the weighted-average number of shares of common stock outstanding during the period. The weighted-average number of shares used to compute diluted loss per share excludes any assumed exercise of stock options and warrants, shares reserved for purchase under the Company's 2016 Employee Stock Purchase Plan ("ESPP"), the assumed release of restriction of restricted stock units, and shares subject to repurchase as the effect would be anti-dilutive. No dilutive effect was calculated for the three and nine months ended December 31, 2017 or 2016, as the Company reported a net loss for each respective period and the effect would have been anti-dilutive.

Common stock equivalents excluded from computing diluted net loss per share were approximately 14.0 million at December 31, 2017, and 12.7 million at December 31, 2016.

**Note 2. Stockholders' Equity**

***Stock-based compensation expense and valuation information***

Stock-based compensation expense for all stock awards consists of the following (in thousands):

| | Three Months Ended December 31, 2017 | Three Months Ended December 31, 2016 | Nine Months Ended December 31, 2017 | Nine Months Ended December 31, 2016 |
|---|---|---|---|---|
| Research and development | $ 210 | $ 444 | $ 925 | $ 1,231 |
| General and administrative | $ 1,040 | $ 1,574 | $ 4,675 | $ 4,309 |
| Total | $ 1,250 | $ 2,018 | $ 5,600 | $ 5,540 |

The total unrecognized compensation cost related to unvested stock option grants as of December 31, 2017 was approximately $6,710,000 and the weighted average period over which these grants are expected to vest is 2.54 years.

The total unrecognized compensation cost related to unvested restricted stock units (not including performance-based restricted stock units) as of December 31, 2017 was approximately $4,768,000, which will be recognized over a weighted average period of 2.98 years.

The total unrecognized compensation cost related to unvested performance-based restricted stock units as of December 31, 2017 was approximately $317,000 which will be recognized over a weighted average period of 2.25 years.

As of December 31, 2017, there was no unrecognized stock-based compensation expense for restricted stock awards.

The total unrecognized stock-based compensation cost related to unvested employee stock purchase plan ("ESPP") shares as of December 31, 2017 was approximately $10,000, which will be recognized over a period of 2 months.

The Company calculates the grant date fair value of all stock-based awards in determining the stock-based compensation expense. Stock-based awards include (i) stock options, (ii) restricted stock awards, (iii) restricted stock units, (iv) performance-based restricted stock units, and (v) rights to purchase stock under the 2016 Employee Stock Purchase Plan.

The Company uses the Black-Scholes valuation model to calculate the fair value of stock options. Stock-based compensation expense is recognized over the vesting period using the straight-line method. The fair value of stock options was estimated at the grant date using the following weighted average assumptions:

| | Three Months Ended December 31, 2017 | Three Months Ended December 31, 2016 | Nine Months Ended December 31, 2017 | Nine Months Ended December 31, 2016 |
|---|---|---|---|---|
| Dividend yield | — | — | — | — |
| Volatility | 80.71% | 72.99% | 76.86% | 72.08% |
| Risk-free interest rate | 2.15% | 1.68% | 1.81% | 1.13% |
| Expected life of options | 6.00 years | 6.00 years | 6.00 years | 6.00 years |
| Weighted average grant date fair value | $ 1.04 | $ 2.14 | $ 1.73 | $ 2.43 |

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 as an early-stage commercial business, 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 U.S. Treasury rates. 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. Certain options granted to consultants are subject to variable accounting treatment and are required to be revalued until vested.

The fair value of each restricted stock unit and performance-based restricted stock unit is recognized as stock-based compensation expense over the vesting term of the award. The fair value is based on the closing stock price on the date of the grant.

The fair value of each restricted stock award is recognized as stock-based compensation expense over the vesting term of the award. The fair value is based on the closing stock price on the date of the grant.

The Company uses the Black-Scholes valuation model to calculate the fair value of shares issued pursuant to the Company's ESPP. Stock-based compensation expense is recognized over the purchase period using the straight-line method. The fair value of ESPP shares was estimated at the purchase period commencement date using the following assumptions:

| | Three Months Ended December 31, 2017 | Three Months Ended December 31, 2016 | Nine Months Ended December 31, 2017 | Nine Months Ended December 30, 2016 |
|---|---|---|---|---|
| Dividend yield | — | — | — | — |
| Volatility | 43.03% | 72.89% | 43.03 - 74.70% | 72.89% |
| Risk-free interest rate | 1.10% | 0.47% | 0.79 - 1.10% | 0.47% |
| Expected term | 6 months | 6 months | 6 months | 6 months |
| Grant date fair value | $ 0.52 | $1.22 | $0.52 - $1.04 | $1.22 |

The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future. For the first full year of ESPP offering periods, beginning September 1, 2016, due to the Company's limited historical data as an early-stage commercial business, the estimated volatility incorporates the historical and implied volatility of comparable companies whose share prices are publicly available. As of September 1, 2017 and the beginning of the second year of ESPP offering periods, the Company is using our Company-specific volatility rate. The risk-free interest rate assumption was based on U.S. Treasury rates. The expected life is the 6-month purchase period.

***Preferred stock***

The Company is authorized to issue 25,000,000 shares of preferred stock. There are no shares of preferred stock currently outstanding, and the Company has no current plans to issue shares of preferred stock.

***Common stock***

On April 24, 2017, the Company filed a Registration Statement on Form S-8 with the SEC authorizing the issuance of 2,297,034 shares of the Company's common stock, pursuant to the terms of an Incentive Award Stock Option Agreement and an Incentive Award Performance-Based Restricted Stock Unit Agreement (collectively, the "Incentive Award Agreements").

In December 2014, the Company entered into an equity offering sales agreement, or the 2014 Sales Agreement, with an investment banking firm. In July 2016, the Company registered the sale of up to $26.6 million of common stock under the 2014 Sales Agreement pursuant to its shelf registration statement on Form S-3 (File No. 333-202382), or the 2015 Shelf, that expires on March 17, 2018.

During the three and nine months ended December 31, 2017, the Company issued 2,255,541 and 3,793,758 shares of common stock, respectively, for net proceeds of $3.1 million and $7.1 million, respectively, in at-the-market offerings under the 2014 Sales Agreement. During the three and nine months ended December 31, 2016, the Company issued 0 and 997,181 shares of common stock, respectively, for net proceeds of $0 and $4.5 million, respectively. As of December 31, 2017, the Company has sold an aggregate of 5,790,939 shares of common stock in at-the-market offerings under the 2014 Sales Agreement, with net proceeds of approximately $17.9 million. Based on sales through December 31, 2017, the Company can sell an additional $14.6 million of shares pursuant to the 2014 Sales Agreement under the 2015 Shelf prior to March 17, 2018. The Company intends to use the net proceeds raised through any at-the-market sales for general corporate purposes, including research and development, the commercialization of the Company's products, general administrative expenses, and working capital and capital expenditures.

During the three months ended December 31, 2017 and 2016, the Company issued 0 and 207,500 shares of common stock upon the exercise of 0 and 207,500 warrants, respectively. During the nine months ended December 31, 2017 and 2016, the Company issued 0 and 330,604 shares of common stock up on the exercise of 0 and 367,500 warrants, respectively.

During the three months ended December 31, 2017 and 2016, the Company issued 0 and 39,005 shares of common stock upon the exercise of 0 and 39,005 stock options, respectively. During the nine months ended December 31, 2017 and 2016, the Company issued 500,000 and 245,271 shares of common stock upon the exercise of 500,000 and 245,271 stock options, respectively.

***Restricted stock units***

A summary of the Company's restricted stock unit (not including performance-based restricted stock units) activity from March 31, 2017 through December 31, 2017 is as follows:

| | Number of Shares | | Weighted Average Price |
|---|---|---|---|
| Unvested at March 31, 2017 | 1,178,114 | $ | 3.57 |
| Granted | 1,959,678 | $ | 2.62 |
| Vested | (451,587) | $ | 3.27 |
| Cancelled / forfeited | (533,233) | $ | 2.91 |
| Unvested at December 31, 2017 | 2,152,972 | $ | 2.93 |

***Performance-based restricted stock units***

On April 24, 2017, in connection with the appointment of a new Chief Executive Officer ("CEO"), the Company allocated 208,822 Performance-Based Restricted Stock Units ("PBRSUs") outside of the 2012 Plan. The Company intends for these to be "inducement awards" within the meaning of NASDAQ Marketplace Rule 5635(c)(4). While outside the Company's 2012 Plan, the terms and conditions of these awards are consistent with awards granted to the Company's executive officers pursuant to the 2012 Plan. On August 23, 2017, the Board of Directors formally approved the vesting criteria for the PBRSUs allocated by the Company on April 24, 2017. The units are divided into five separate tranches each with independent vesting criteria. The first four tranches have performance criteria related to annual revenue goals with measurement at the end of fiscal year 2018 (20 percent), fiscal year 2019 (20 percent), fiscal year 2020 (20 percent), and fiscal year 2021 (20 percent). The fifth tranche has a performance metric related to a path to profitability goal measured as Negative Adjusted Earnings Before Interest, Taxes, Depreciation and Amortization ("EBITDA") achievable at any point between the grant date and the end of fiscal year 2020 (20 percent). The number of units that ultimately vest for each tranche will range from 0 percent to 120 percent of the target amount, not to exceed 208,822 in aggregate. As of December 31,

2017, no tranches had vested and 0% of current year tranche is expected to vest, but 120% of the Negative Adjusted EBITDA tranche is expected to vest in a future year.

The grant date fair values of the tranches are collectively $393,000 of which one-fifth is being recognized over each tranches' service period. The Company began recording stock-based compensation expense for these tranches after the August 23, 2017 grant date when the financial performance goals were established and approved. As of December 31, 2017, PBRSUs from the Negative Adjusted EBITDA tranche are expected to vest in the amount of 50,117 shares.

A summary of the Company's performance-based restricted stock unit activity from March 31, 2017 through December 31, 2017 is as follows:

| | Number of Shares | Weighted Average Price |
|---|---|---|
| Unvested at March 31, 2017 | — | $ — |
| Granted | 208,822 | $ 1.88 |
| Vested | — | $ — |
| Cancelled / forfeited | — | $ — |
| Unvested at December 31, 2017 | 208,822 | $ 1.88 |

***Stock options***

On April 24, 2017, in connection with the appointment of a new CEO, the Company granted 2,088,212 stock options outside of the 2012 Plan. The Company intends for these to be "inducement awards" within the meaning of NASDAQ Marketplace Rule 5635(c)(4). While granted outside the Company's 2012 Plan, the terms and conditions of these awards are consistent with awards granted to the Company's executive officers pursuant to the 2012 Plan. These stock options vest over a four-year period with a quarter vesting on the one year anniversary of the vesting commencement date.

A summary of the Company's stock option activity from March 31, 2017 to December 31, 2017 is as follows:

| | Options Outstanding | Weighted Average Exercise Price | Aggregate Intrinsic Value |
|---|---|---|---|
| Outstanding at March 31, 2017 | 10,956,201 | $ 4.63 | $ 4,876,437 |
| Options granted | 2,370,168 | $ 2.64 | $ — |
| Options cancelled / forfeited | (1,394,217) | $ 5.07 | $ — |
| Options exercised | (500,000) | $ 1.65 | $ 235,000 |
| Outstanding at December 31, 2017 | 11,432,152 | $ 4.30 | $ 783,962 |
| Vested and Exercisable at December 31, 2017 | 7,177,206 | $ 4.88 | $ 783,962 |

The weighted average remaining contractual term of options exercisable and outstanding at December 31, 2017 was approximately 5.1 years.

***Employee Stock Purchase Plan***

In June 2016, our Board of Directors adopted, and in August 2016 stockholders subsequently approved, the 2016 Employee Stock Purchase Plan ("ESPP"). We reserved 1,500,000 shares of common stock for issuance thereunder. The ESPP permits employees after five months of service to purchase common stock through payroll deductions, limited to 15 percent of each employee's compensation up to the lower of $25,000 or 10,000 shares per employee per year. Shares under the ESPP are purchased at 85 percent of the fair market value at the lower of (i) the closing price on the first trading day of the six-month purchase period or (ii) the closing price on the last trading day of the six-month purchase period. The initial offering period commenced in September 2016. At December 31, 2017, there were 1,372,960 shares available for purchase under the ESPP.

***Warrants***

The following table summarizes warrant activity for the nine months ended December 31, 2017:

| | Warrants | | Weighted Average Exercise Price |
|---|---|---|---|
| Balance at March 31, 2017 | 221,370 | $ | 7.16 |
| Granted | — | $ | — |
| Exercised | — | $ | — |
| Cancelled | (1,370) | $ | 2.28 |
| Balance at December 31, 2017 | 220,000 | $ | 7.19 |

The warrants outstanding at December 31, 2017 are exercisable at prices between $6.84 and $7.62 per share, and have a weighted average remaining term of approximately 1.46 years.

***Common stock reserved for future issuance***

Common stock reserved for future issuance consisted of the following at December 31, 2017:

| | |
|---|---|
| Common stock warrants outstanding | 220,000 |
| Common stock options outstanding under the 2008 Plan | 622,192 |
| Common stock options outstanding and reserved under the 2012 Plan | 12,026,320 |
| Common stock reserved under the 2016 Employee Stock Purchase Plan | 1,372,960 |
| Restricted stock units outstanding under the 2012 Plan | 2,152,972 |
| Common stock options outstanding and reserved under the Incentive Award Agreements | 2,088,212 |
| Restricted stock units outstanding under the Incentive Award Agreements | 208,822 |
| Total at December 31, 2017 | 18,691,478 |

**Note 3. Commitments and Contingencies**

***Operating leases***

The Company leases laboratory and office space in San Diego, California under two non-cancelable leases as described below.
Since July 2012, the Company has leased its main facilities at 6275 Nancy Ridge Drive, San Diego, California 92121. The lease, as amended in 2013, 2015 and 2016, consists of approximately 45,580 rentable square feet containing laboratory, clean room and office space. Monthly rental payments are currently approximately $120,000 per month with 3% annual escalators. The lease term for 14,685 of the total rentable square footage expires on December 15, 2018, with the remainder of the rentable square footage expiring on September 1, 2021 with the Company having an option to terminate this lease on or after September 1, 2019.

On January 9, 2015, the Company entered into an agreement to lease a second facility consisting of 5,803 rentable square feet of office and lab space located at 6310 Nancy Ridge Drive, San Diego, California 92121. The term of the lease is 36 months, beginning on February 1, 2015 and ending on January 31, 2018, with monthly rental payments of approximately $12,000 commencing on April 1, 2015. In addition, there are annual rent escalations of 3% on each 12-month anniversary of the lease commencement date.

In addition to these two leases, the Company leased a third facility from February 1, 2016 through January 31, 2017, consisting of 12,088 rentable square feet of office space located at 6166 Nancy Ridge Drive, San Diego, California 92121 with a monthly rent of $15,000.

The Company records rent expense on a straight-line basis over the life of the leases and records the excess of expense over the amounts paid as deferred rent. In addition, one of the leases provides for certain improvements made for the Company’s benefit to be funded by the landlord. Such costs, totaling approximately $518,000 to date, have been capitalized as fixed assets and included in deferred rent.

Rent expense was approximately $362,000 and $307,000 for the three months ended December 31, 2017 and 2016, respectively, and $1,094,000 and $912,000 for the nine months ended December 31, 2017 and 2016, respectively.

Future minimum rental payments required under operating leases that have initial or remaining non-cancelable lease terms in excess of one year as of December 31, 2017, are as follows (in thousands):

| | | |
|---|---|---|
| Fiscal year ended March 31, 2018 | $ | 388 |
| Fiscal year ended March 31, 2019 | | 1,465 |
| Fiscal year ended March 31, 2020 | | 1,073 |
| Fiscal year ended March 31, 2021 | | 1,104 |
| Fiscal year ended March 31, 2022 | | 467 |
| Thereafter | | — |
| Total | $ | 4,497 |

***Legal matters***

In addition to commitments and obligations in the ordinary course of business, the Company may be subject, from time to time, to various claims and pending and potential legal actions arising out of the normal conduct of its business. The Company assesses contingencies to determine the degree of probability and range of possible loss for potential accrual in its financial statements. Because litigation is inherently unpredictable and unfavorable resolutions could occur, assessing litigation contingencies is highly subjective and requires judgments about future events. When evaluating contingencies, the Company may be unable to provide a meaningful estimate due to a number of factors, including the procedural status of the matter in question, the presence of complex or novel legal theories, and/or the ongoing discovery and development of information important to the matters. In addition, damage amounts claimed in litigation against it may be unsupported, exaggerated or unrelated to possible outcomes, and as such are not meaningful indicators of its potential liability.

The Company regularly reviews contingencies to determine the adequacy of its accruals and related disclosures. During the period presented, the Company has not recorded any accrual for loss contingencies associated with such claims or legal proceedings; determined that an unfavorable outcome is probable or reasonably possible; or determined that the amount or range of any possible loss is reasonably estimable. However, the outcome of legal proceedings and claims brought against the Company is subject to significant uncertainty. Therefore, although management considers the likelihood of such an outcome to be remote, if one or more of these legal matters were resolved against the Company in a reporting period, the Company's consolidated financial statements for that reporting period could be materially adversely affected.

**Note 4. 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 within the United States. Accounts at these institutions are secured by the Federal Deposit Insurance Corporation. 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.

The Company is also potentially subject to concentrations of credit risk in its revenues and accounts receivable. Because it is in the early commercial stage, the Company's revenues to date have been derived from a relatively small number of customers and collaborators. However, the Company has not historically experienced any accounts receivable write-downs and management does not believe significant credit risk exists as of December 31, 2017.

**Note 5. Related Parties**

The Company has entered into two agreements with related parties in the ordinary course of its business and on terms and conditions it believes are as fair as those it offers and receives from independent third parties. Each agreement was ratified by the Company's Board of Directors or a committee thereof pursuant to its related party transaction policy. In August 2017, the Company entered into a services agreement with Cirius Tx, Inc., an entity for which Robert Baltera, Jr., a director of the Company, serves as Chief Executive Officer. Under this agreement and its amendments, the Company has provided ExVive™ Liver Tissue Services for Cirius amounting to $44,000 and $94,000 in the three and nine months ended December 31, 2017, respectively. The agreement contains another $74,000 of ExVive™ Liver Tissue Services to be completed in the fourth quarter of fiscal 2018.

In November 2017, the Company entered into a collaboration agreement with Viscient Biosciences, an entity which Keith Murphy, a former director and Chief Executive Officer of the Company, serves as Chief Executive Officer. Under this agreement, the parties intend to develop a custom research platform for studying liver disease. The Company expects the platform to expand its current service portfolio for compound screening in disease models, which aids the drug discovery work for other customers. Viscient intends

to target early discovery work for non-alcoholic fatty liver disease (“NAFLD”) and non-alcoholic steatohepatitis (“NASH”). Under this agreement and its amendments, the Company will provide research services to Viscient amounting to $323,000 to be completed in fiscal 2018. For the three and nine months ended December 31, 2017, $323,000 of revenue was recognized related to this agreement.

**Note 6. Recent Accounting Pronouncements**

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2014-09, Revenue from Contracts with Customers, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The standard will replace most existing revenue recognition guidance in U.S. generally accepted accounting principles (“GAAP”) when it becomes effective. The new standard was originally effective for public companies for annual reporting periods beginning after December 15, 2016, with no early application permitted. In August 2015, the FASB issued ASU No. 2015-14 that defers by one year the effective date for all entities, with application permitted as of the original effective date. The updated standard becomes effective for us on April 1, 2018, with early adoption permitted as of April 1, 2017. The standard permits the use of either the retrospective or cumulative effect transition method. The Company is still evaluating the effect this update will have on our consolidated financial statements and our disclosure requirements under the new guidance. The Company will continue to evaluate additional changes, modifications or interpretations to the guidance which may impact the current conclusions. The Company expects to adopt the new standard for the fiscal year beginning April 1, 2018 and anticipates that the modified retrospective application method will be applied.

In February 2016, the FASB issued ASU 2016-02, Leases, which requires an entity to recognize lease assets and lease liabilities on the balance sheet for leases with terms of more than 12 months and to disclose key information about leasing arrangements. This new guidance is effective for us on April 1, 2019, with early adoption permitted in any interim or annual period. The Company is currently evaluating the impact that this guidance will have on its financial statements and related disclosures.

In March 2016, the FASB issued ASU 2016-09, Compensation-Stock Compensation (Topic 718), which requires an entity recognize excess tax benefits and deficiencies as income tax expense or benefit, the cash flows of which should be included as operating activity in the statement of cash flows. An entity is allowed to either continue accruing compensation cost based on expected forfeitures or to begin recognizing expense as forfeitures occur. In addition, an entity may withhold the maximum statutory tax, increasing the allowable cash settlement portion of awards. The cash paid by an employer when directly withholding shares for tax purposes should be included in the financing activity section of the statement of cash flows. This new guidance became effective for us on April 1, 2017. The requirements of ASU 2016-09 did not have a significant impact on our consolidated financial statements.

In May 2017, the FASB issued ASU No. 2017-09, Compensation - Stock Compensation: Scope of Modification Accounting, which provides clarity and guidance around which changes to the terms or conditions of a stock-based payment award require an entity to apply modification accounting in Topic 718. The standard is effective for annual reporting periods beginning after December 15, 2017, and interim periods within those annual reporting periods. The adoption of this guidance will have no impact on our financial statements unless we have modification accounting in accordance with Topic 718.

In July 2017, the FASB issued ASU No. 2017-11, Earnings Per Share (Topic 260); Distinguishing Liabilities from Equity (Topic 480); Derivatives and Hedging (Topic 815): (Part I) Accounting for Certain Financial Instruments with Down Round Features, (Part II) Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception. These amendments simplify the accounting for certain financial instruments with down round features. The amendments require companies to disregard the down round feature when assessing whether the instrument is indexed to its own stock, for purposes of determining liability or equity classification. Companies that provide earnings per share (EPS) data will adjust their basic EPS calculation for the effect of the feature when triggered (i.e., when the exercise price of the related equity-linked financial instrument is adjusted downward because of the down round feature) and will also recognize the effect of the trigger within equity. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The adoption of this guidance will have no impact on our financial statements as the Company’s only derivative liabilities were all exercised or expired as of March 31, 2017 and were removed from the Balance Sheet.

In December 2017, the United States (“U.S.”) enacted the Tax Cuts and Jobs Act (the “2017 Act”), which changes existing U.S. tax law and includes various provisions that are expected to affect public companies. The 2017 Act (i) changes U.S. corporate tax rates, (ii) generally reduces a company’s ability to utilize accumulated net operating losses, and (iii) requires the calculation of a one-time transition tax on certain previously unrepatriated foreign earnings and profits (“E&P”). The 2017 Act will also impact estimates of a company’s deferred tax assets and liabilities.
We are currently in the early stages of evaluating the financial statement impact of the 2017 Act. Based on initial assessments, we expect significant adjustments to our gross deferred tax assets and liabilities; however, we also expect to record a corresponding offset

to our estimated full valuation allowance against our net deferred tax assets, which should result in minimal net effect to our provision for income taxes. In accordance with SEC issued guidance under Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act ("SAB 118"), we have not recorded any provisional income tax effects of the 2017 Act in our financial statements as our anticipated impact is minimal and we do not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete accounting for the change in tax law.

**Note 7. Subsequent Events**

During January 2018, the Company issued 1.5 million shares of its common stock pursuant to its at-the-market ("ATM") facility for net proceeds exceeding $2.1 million.

## ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

*The following management's discussion and analysis of financial condition and results of operations should be read in conjunction with the Company's historical consolidated financial statements and the related notes thereto included in our Annual Report on Form 10-K for the fiscal year ended March 31, 2017. This discussion and analysis contains forward-looking statements, such as statements related to our plans, objectives, expectations and intentions. Any statements that are not statements of historical fact are forward-looking statements. When used, the words "believe," "plan," "intend," "anticipate," "target," "estimate," "expect" and the like, and/or future tense or conditional constructions such as "will," "may," "could," "should," or similar expressions, identify certain of these forward-looking statements. These forward-looking statements speak only as of the date of this Quarterly Report on Form 10-Q and are subject to risks and uncertainties, including those described in this Quarterly Report on Form 10-Q, as well as the risk factors disclosed in our Annual Report on the Form 10-K for the fiscal year ended March 31, 2017, filed with the Securities and Exchange Commission on June 7, 2017, that could cause our actual results or events to differ materially from those expressed or implied by such forward-looking statements. Except to the limited extent required by applicable law, the Company does not undertake any obligation to update forward-looking statements to reflect events or circumstances occurring after the date of this Quarterly Report.*

### Basis of Presentation

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 subsidiaries.

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, with Organovo, Inc. surviving the merger as a wholly-owned subsidiary of the Company (the "Merger"). As a result of the Merger, the Company acquired and has continued the business of Organovo, Inc.

Organovo, Inc. was founded in Delaware in April 2007. Activities since Organovo, Inc.'s inception through December 31, 2017 have been devoted primarily to developing and commercializing its proprietary platform technology to produce and study living tissues that emulate key aspects of human biology and disease, raising capital and building infrastructure.

In addition, in September 2015, we established a wholly-owned subsidiary, Organovo UK, Ltd., to establish a sales presence in Europe. As of December 31, 2017, there has been no significant activity related to this subsidiary.

In January 2016, we announced that our wholly-owned subsidiary, Samsara Sciences, Inc. ("Samsara"), commenced commercial operations. We formed Samsara to serve as a key source of certain of the primary human cells that we utilize in our products and services and in the development of therapeutic products. In addition to serving as one of our key suppliers, Samsara offers human cells for research use by life science customers, both directly and through distribution partners.

The condensed consolidated financial statements included in this Form 10-Q have been prepared in accordance with the Securities and Exchange Commission (the "SEC") instructions to Quarterly Reports on Form 10-Q. Accordingly, the condensed consolidated financial statements presented elsewhere in this Form 10-Q and discussed below are unaudited and do not contain all the information required by U.S. generally accepted accounting principles ("GAAP") to be included in a full set of financial statements. The audited financial statements for the year ended March 31, 2017, filed with the SEC on Form 10-K on June 7, 2017 include a summary of our significant accounting policies and should be read in conjunction with this Form 10-Q. In the opinion of management, all material adjustments necessary to present fairly the results of operations for such periods have been included in this Form 10-Q. 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.

### Overview

We are a biotech company focused on developing and commercializing a proprietary platform technology to produce and study living tissues that emulate key aspects of human biology and disease. Our proprietary platform can be employed in drug discovery and development, and as therapeutic implants for the treatment of damaged or diseased tissues and organs as we create living tissue constructs that mimic key aspects of native human biology. Our business model aims to generate a growing stream of fee-for-service, product, collaboration, grant, and licensing revenues by providing pharmaceutical and biotech clients access to our proprietary platform to facilitate breakthrough translational research from target discovery to high content clinical profiling of drug candidates. Our product revenues generated through Samsara, our wholly-owned subsidiary, which specializes in the procurement, preparation, and curation of a broad range of human cells which form the building blocks of Organovo's and our clients' research programs.

The funds received from our various revenue agreements help to support our therapeutics research program, which is aimed at generating multiple Investigative New Drug ("IND") Application track products. Our initial focus is on critical unmet medical needs in the liver disease space, including our lead program for NovoTissues® targeting Alpha-1 antitrypsin deficiency, for which we have received orphan drug designation ("ODD") from the Food and Drug Administration ("FDA"). We believe our foundational and proprietary approach to the bioprinting of living tissues, as disclosed in peer-reviewed scientific publications, and the continuous evolution of our core bioengineering technology platform combine to provide us with the opportunity to fill many critical gaps in commercially available disease modeling and tissue transplantation.

We continuously engage in research and development to enhance our platform technology, to develop new product and service offerings and to pursue our therapeutic initiatives. Our research and development efforts include internal initiatives as well as collaborative development opportunities with third parties. While our proof of principle work has spanned multiple organs and tissue types, our current research focus is aimed at developing a broad range of tissue applications for the liver and kidney, which aligns well with major therapeutic areas of focus in the pharmaceutical and biotech industry. Specifically, we are developing disease models that allow researchers to explore the interaction of their drugs with diseased liver and kidney tissue, from the onset of disease to advanced stages. Organovo continues to receive client and peer review distinction for the study of Non-Alcoholic Steatohepatitis ("NASH"), which is a significant and expanding disease area affecting 10-15% of the US population. Our clients are closely engaged with us to develop screening applications in NASH to offset the lack of comprehensive preclinical and animal models with the added benefit that our platform may provide a valuable early indication of how client drugs may perform in the human clinical setting. Our tissue models in both liver and kidney fibrosis also represent key areas of client engagement. Other proof-of-concept research areas in recent years have included the gut, skin, hair follicle, and other undisclosed tissue programs.

Organovo's initial therapeutics focus is on a series of genetic diseases, broadly known as Inborn Errors of Metabolism ("IEM's") where the patient liver exhibits a genetic abnormality blocking its ability to perform a basic metabolic function such as processing ammonia or generating a specific and necessary enzyme such as Alpha-1 antitrypsin. These deficiencies can lead to a dangerous accumulation of toxins and/or chronic damage that is often fatal if not addressed by ongoing medical care and an organ transplant. Our therapeutic strategy is to create small implantable tissue "patches", NovoTissues®, which may one day postpone or prevent the need for a complete organ transplant. Our first IND program will target Alpha-1 antitrypsin deficiency. In December 2017, the FDA granted Organovo ODD for Alpha-1 antitrypsin deficiency, which confers certain regulatory access, streamlining, and financial benefits to our program. We expect to file our first IND by the end of calendar 2020, and we intend to develop additional IND track therapeutic programs utilizing our NovoTissues® to target other indications within this disease category.

**Critical Accounting Policies, Estimates, and Judgments**

Our financial statements are prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. We continually evaluate our estimates and judgments, the most critical of which are those related to revenue recognition, valuation of long-lived assets and warrant liability, stock-based compensation and the timing of the achievement of collaboration milestones. We base our estimates and judgments on historical experience and other factors that we believe to be reasonable under the circumstances. Materially different results can occur as circumstances change and additional information becomes known. Besides the estimates identified above that are considered critical, we make many other accounting estimates in preparing our financial statements and related disclosures. All estimates, whether or not deemed critical, affect reported amounts of assets, liabilities, revenues and expenses, as well as disclosures of contingent assets and liabilities. These estimates and judgments are also based on historical experience and other factors that are believed to be reasonable under the circumstances. Materially different results can occur as circumstances change and additional information becomes known, even for estimates and judgments that are not deemed critical.

For further information, refer to the Company's audited financial statements and notes thereto included in the Annual Report on Form 10-K for the year ended March 31, 2017, filed with the SEC on June 7, 2017.

## Results of Operations

***Comparison of the three months ended December 31, 2017 and 2016***

The following table summarizes our results of operations for the three months ended December 31, 2017 and 2016 (in thousands):

| | Three months ended December 31, | | Increase (decrease) | |
|---|---|---|---|---|
| | 2017 | 2016 | $ | % |
| **Revenues** | $ 1,153 | $ 1,151 | $ 2 | 0% |
| **Cost of revenues** | $ 192 | $ 212 | $ (20) | (9%) |
| **Research and development** | $ 4,005 | $ 5,024 | $ (1,019) | (20%) |
| **Selling, general and administrative** | $ 4,865 | $ 5,546 | $ (681) | (12%) |
| **Other income** | $ 118 | $ 51 | $ 67 | 131% |

### Revenues

For the three months ended December 31, 2017, total revenue of $1.2 million was unchanged from the three months ended December 31, 2016. Product and service revenue of approximately $0.8 million for the three months ended December 31, 2017 increased 19% from the prior-year period. This increase was primarily driven by an increase in contracts for our bioprinted liver tissue disease modeling research services and increased sales of primary human cell and tissue products, which offset a reduction in contracts for our liver tissue toxicology research services. Collaboration revenue and licensing revenue decreased by $0.4 million as compared to the three months ended December 31, 2016 due to the absence of revenue from a collaboration agreement that was completed in fiscal 2017. Grant revenue increased by more than $0.2 million for the three months ended December 31, 2017 due to the commencement of research under our National Institutes of Health (“NIH”) grant during the second quarter of fiscal 2018.

### Costs and Expenses

### Cost of Revenues

Cost of product and service revenues, which reflects expenses related to manufacturing our products and delivering services was $0.2 million for the three months ended December 31, 2017, unchanged from the three months ended December 30, 2016. The lack of increase was primarily due to a higher mix of sales from higher margin primary human cell and tissue products over the prior year period.

### Research and Development Expenses

The following table summarizes our research and development expenses for the three months ended December 31, 2017 and 2016 (in thousands):

| | Three months ended December 31, 2017 | % of total | Three months ended December 31, 2016 | % of total | Increase (decrease) $ | Increase (decrease) % |
|---|---|---|---|---|---|---|
| **Research and development** | $ 3,632 | 91% | $ 4,429 | 88% | $ (797) | (18%) |
| **Non-cash stock-based compensation** | $ 211 | 5% | $ 444 | 9% | $ (233) | (52%) |
| **Depreciation and amortization** | $ 162 | 4% | $ 151 | 3% | $ 11 | 7% |
| **Total research and development expenses** | **$ 4,005** | **100%** | **$ 5,024** | **100%** | **$ (1,019)** | **(20%)** |

Research and development expenses were approximately $4.0 million, a decrease of $1.0 million, or 20%, from the prior year period. The decrease was primarily due to a $0.7 million decrease in personnel related costs and a $0.5 million reduction in lab supply costs, which offset a $0.1 million increase in facilities costs. The decrease in personnel related costs was driven by a reduction in staffing from the Company’s restructuring, a reduction of incentive compensation costs, and a reduction of stock-based compensation. The Company’s average full-time research and development staff decreased from an average of seventy-eight full-time employees for the three months ended December 31, 2016 to an average of sixty-five full-time employees for the three months ended December 31, 2017.

**Selling, General and Administrative Expenses**

The following table summarizes our selling, general and administrative expenses for the three months ended December 31, 2017 and 2016 (in thousands):

| | Three months ended December 31, 2017 | % of total | Three months ended December 31, 2016 | % of total | Increase (decrease) $ | Increase (decrease) % |
|---|---|---|---|---|---|---|
| **Selling, general and administrative** | $ 3,671 | 75% | $ 3,801 | 69% | $ (130) | (3%) |
| **Non-cash stock-based compensation** | $ 1,040 | 21% | $ 1,574 | 28% | $ (534) | (34%) |
| **Depreciation and amortization** | $ 154 | 3% | $ 171 | 3% | $ (17) | (10%) |
| **Total selling, general and administrative expenses** | **$ 4,865** | **100%** | **$ 5,546** | **100%** | **$ (681)** | **(12%)** |

For the three months ended December 31, 2017, selling, general and administrative expenses were approximately $4.9 million, a decrease of $0.7 million, or 12%, over the prior year period of approximately $5.5 million. This decrease was largely due to a decrease in personnel related costs of $0.5 million and a decrease in other corporate costs of $0.2 million. The decrease in personnel related costs was driven by a $0.5 million reduction in stock-based compensation expense resulting from the departures of two executives and our former Chairman of the Board of Directors and from the reduction in the Company's share price, a $0.4 million reduction in the Company's incentive compensation cost, and a $0.3 million reduction in other personnel costs, which more than offset a $0.8 million increase in severance costs related to the Company's restructuring plan. The Company's average selling, general and administrative headcount was thirty-two full-time employees for the three months ended December 31, 2017 compared to thirty-six full-time in the prior year period.

**Other Income (Expense)**

Other income was approximately $0.1 million for the three months ended December 31, 2017, and consisted primarily of interest income. For the three months ended December 31, 2016, other income of less than $0.1 million consisted primarily of interest income. Interest income increased from the same period of fiscal 2017 due to higher average yields on short-term investment balances.

***Comparison of the nine months ended December 31, 2017 and 2016***

The following table summarizes our results of operations for the nine months ended December 31, 2017 and 2016 (in thousands):

| | Nine months ended December 31, 2017 | Nine months ended December 31, 2016 | Increase (decrease) $ | Increase (decrease) % |
|---|---|---|---|---|
| **Revenues** | $ 3,498 | $ 3,418 | $ 80 | 2% |
| **Cost of revenues** | $ 747 | $ 773 | $ (26) | (3%) |
| **Research and development** | $ 13,982 | $ 14,012 | $ (30) | (0%) |
| **Selling, general and administrative** | $ 16,457 | $ 16,520 | $ (63) | (0%) |
| **Other income** | $ 334 | $ 120 | $ 214 | 178% |

**Revenues**

For the nine months ended December 31, 2017, total revenue of $3.5 million was up $0.1 million, or 2% over the nine months ended December 31, 2016. Product and service revenue of approximately $2.7 million for the nine months ended December 31, 2017 increased 14% over the nine months ended December 31, 2016. This increase was driven by an increase in sales of primary human cell and tissue products by our Samsara Sciences subsidiary and contracts for our bioprinted liver tissue disease modeling research services, which more than offset the reduction in contracts for our bioprinted liver tissue toxicology research services. Collaboration and licensing revenue decreased $0.6 million as compared to the nine months ended December 31, 2016 due to the absence of revenues from a collaboration agreement that was completed in fiscal 2017. Grant revenue increased by $0.4 million in the nine months ended December 31, 2017 due to the commencement of research under our National Institutes of Health ("NIH") grant during the fiscal 2018 period.

**Costs and Expenses**

**Cost of Revenues**

Cost of product and service revenues, which reflects expenses related to manufacturing our products and delivering services was $0.7 million for the nine months ended December 31, 2017, down from $0.8 million for the nine months ended December 31, 2016.

The reduction was primarily due to a higher mix of sales of higher margin primary human cell and tissue products over the prior year period.

**Research and Development Expenses**

The following table summarizes our research and development expenses for the nine months ended December 31, 2017 and 2016 (in thousands):

| | Nine months ended December 31, 2017 | % of total | Nine months ended December 31, 2016 | % of total | Increase (decrease) $ | Increase (decrease) % |
|---|---|---|---|---|---|---|
| **Research and development** | $ 12,559 | 90% | $ 12,384 | 88% | $ 175 | 1% |
| **Non-cash stock-based compensation** | $ 926 | 7% | $ 1,232 | 9% | $ (306) | (25%) |
| **Depreciation and amortization** | $ 497 | 3% | $ 396 | 3% | $ 101 | 26% |
| **Total research and development expenses** | **$ 13,982** | **100%** | **$ 14,012** | **100%** | **$ (30)** | **(0%)** |

Research and development expenses were approximately $14.0 million for the nine months ended December 31, 2017, unchanged from the prior year period, as a $0.5 million increase in allocated facilities costs and a $0.2 million increase in outside services costs related to our preclinical therapeutic program were offset by a $0.5 million decrease in personnel related costs and a $0.2 million decrease in materials costs. The reduction in personnel related costs was primarily due to a reduction in stock-based compensation costs and incentive compensation costs as well as a decrease in full-time research and development staff from an average of seventy-nine full-time employees for the nine months ended December 31, 2016 to an average of seventy-four full-time employees for the nine months ended December 31, 2017.

**Selling, General and Administrative Expenses**

The following table summarizes our selling, general and administrative expenses for the nine months ended December 31, 2017 and 2016 (in thousands):

| | Nine months ended December 31, 2017 | % of total | Nine months ended December 31, 2016 | % of total | Increase (decrease) $ | Increase (decrease) % |
|---|---|---|---|---|---|---|
| **Selling, general and administrative** | $ 11,316 | 69% | $ 11,784 | 71% | $ (468) | (4%) |
| **Non-cash stock-based compensation** | $ 4,675 | 28% | $ 4,309 | 26% | $ 366 | 8% |
| **Depreciation and amortization** | $ 466 | 3% | $ 427 | 3% | $ 39 | 9% |
| **Total selling, general and administrative expenses** | **$ 16,457** | **100%** | **$ 16,520** | **100%** | **$ (63)** | **(0%)** |

For the nine months ended December 31, 2017, selling, general and administrative expenses were approximately $16.5 million, unchanged from the prior year period as a $0.7 million increase in personnel related costs and a $0.2 million increase in consulting and outside services costs were offset by a $0.6 million decrease in legal costs and a $0.3 million decrease in facilities costs. The increase in personnel related costs was driven by a $0.8 million increase in severance costs related to the Company's restructuring plan and a $0.4 million increase in stock-based compensation expense driven by new restricted share grants, which more than offset a $0.5 million decrease in incentive compensation costs. The Company's average selling, general and administrative headcount was thirty-five full-time employees in each of the first nine months of fiscal 2018 and fiscal 2017.

**Other Income (Expense)**

Other income was approximately $0.3 million for the nine months ended December 31, 2017, and consisted primarily of interest income. For the nine months ended December 31, 2016, other income of $0.1 million consisted primarily of interest income. Interest income increased from the same period of fiscal 2017 due to higher average yields on short-term investment balances.

**Financial Condition, Liquidity and Capital Resources**

The Company has primarily devoted its efforts to developing and commercializing a platform technology to produce and study living tissues that emulate key aspects of human biology and disease, raising capital and building infrastructure.

As of December 31, 2017, the Company had cash and cash equivalents of approximately $47.3 million and an accumulated deficit of $226.7 million. The Company also had negative cash flow from operations of $23.2 million during the nine months ended December 31, 2017. At March 31, 2017, the Company had cash and cash equivalents of approximately $62.8 million and an accumulated deficit of $199.3 million.

At December 31, 2017, the Company had total current assets of approximately $50.3 million and current liabilities of approximately $4.3 million, resulting in working capital of $46.0 million. At March 31, 2017, the Company had total current assets of approximately $65.1 million and current liabilities of approximately $6.0 million, resulting in working capital of $59.1 million.

The following table sets forth a summary of the primary sources and uses of cash for the nine months ended December 31, 2017 and 2016 (in thousands):

| | Nine months ended December 31, | |
|---|---|---|
| | **2017** | **2016** |
| **Net cash (used in) provided by:** | | |
| **Operating activities** | $ (23,246) | $ (21,959) |
| **Investing activities** | $ (160) | $ (1,109) |
| **Financing activities** | $ 7,995 | $ 30,983 |
| **Effect of currency exchange rate** | $ (2) | $ (10) |
| **Net increase (decrease) in cash and cash equivalents** | $ (15,413) | $ 7,905 |

*Operating activities*

Net cash used by operating activities for the nine months ended December 31, 2017 was approximately $23.2 million as compared to $22.0 million used in operating activities for the nine months ended December 31, 2016. This $1.2 million increase in operating cash usage can be attributed primarily to a $2.5 million increase in working capital, which offset a decrease in cash operating expenses.

*Investing activities*

Net cash used in investing activities was approximately $0.2 million and $1.1 million for the nine months ended December 31, 2017 and 2016, respectively. This decrease can be attributed to reduced capital spending, partially offset by an investment in patent related intangible assets during the nine months ended December 31, 2017.

*Financing activities*

Net cash provided by financing activities was approximately $8.0 million during the nine months ended December 31, 2017 due primarily to the $7.1 million net proceeds raised from the sale of common stock in “at-the-market” offerings and approximately $0.9 million through stock option exercises and employee stock purchases. Net cash provided by financing activities was approximately $31.0 million during the nine months ended December 31, 2016 due primarily to net proceeds of $25.7 million and $4.5 million, respectively, through the Company’s secondary offering and the sale of common stock in “at-the-market” offerings, as well as approximately $0.6 million through stock option exercises. The Company intends to use these net proceeds for general corporate purposes, including research and development, the commercialization of its products, general administrative expenses, working capital and capital expenditures.

*Operations funding requirements*

Through December 31, 2017, we have financed our operations primarily through the sale of convertible notes, the private placement of equity securities, the sale of common stock through public and at-the-market (“ATM”) offerings, and from revenue derived from grants and royalty payments, collaborative agreements, product sales and research-based services. Based on our current operating plan and available cash resources, we have sufficient resources to fund our ongoing operations as currently planned for at least the next twelve months from the financial statement issuance date.

The Company will need additional capital to further fund the development and commercialization of its proprietary platform technology to produce and study living tissues that emulate key aspects of human biology and disease that can be used to facilitate drug discovery and development, as well as of its therapeutic tissues focusing on critical unmet medical needs in the liver disease space.

We intend to cover our future operating expenses through cash on hand, revenue derived from research service agreements, product sales, collaborative agreements, grants and license payments, and through the issuance of additional equity or debt securities. Depending on market conditions, 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.

The Company has an effective shelf registration statement on Form S-3 (File No. 333-202382), or the 2015 Shelf, that expires on March 17, 2018. As of December 31, 2017, the Company is authorized to offer and sell under the 2015 Shelf, in one or more offerings, common stock, preferred stock, debt securities, warrants to purchase common stock, preferred stock or debt securities, or any combination of the foregoing, either individually or units compromised one or more of the other securities. On July 20, 2016, the Company filed a prospectus supplement to the 2015 Shelf to move from an expiring shelf registration statement the remaining $26.6

million of common stock that previously could have been sold in ATM offerings pursuant to an equity offering sales agreement it had entered into with an investment banking firm in December 2014. During the nine months ended December 31, 2017, the Company sold 3,793,758 shares of common stock in ATM offerings, with net proceeds of approximately $7.1 million, leaving an additional $14.6 million that can be raised through this ATM program.

Based on its use of the 2015 Shelf through December 31, 2017, the Company can offer an aggregate of $104.3 million in future offerings under the 2015 Shelf, including its ATM program, prior to its expiration date on March 17, 2018.

Having insufficient funds may require us to delay, scale back, or eliminate some or all of our development programs or relinquish rights to our technology on less favorable terms than we would otherwise choose. Failure to obtain adequate financing could eventually adversely affect our ability to operate as a going concern. If we continue to raise additional funds from the issuance of equity securities, there will be substantial dilution to our existing stockholders. 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 December 31, 2017, the Company had 109,322,626 total issued and outstanding shares of common stock, and five-year warrants for the opportunity to purchase an additional 220,000 shares of common stock at exercise prices between $6.84 and $7.62 per share.

In addition, the Company's 2008 Equity Incentive Plan provides for the issuance of up to 896,256 shares of its outstanding common stock and the 2012 Equity Incentive Plan, as amended, provides for the issuance of up to 17,553,986 shares of its common stock, to executive officers, directors, advisory board members, employees and consultants. The Company has also issued time-based and performance-based inducement awards under the Incentive Award Agreements for up to 2,297,034 shares of its common stock. Additionally, 1,500,000 shares of common stock have been reserved for issuance under the 2016 Employee Stock Purchase Plan. In aggregate, issued and outstanding common stock, shares underlying outstanding warrants, and shares issuable under outstanding equity awards or reserved for future issuance under the 2008 and 2012 Equity Incentive Plans and the 2016 Employee Stock Purchase Plan total 128,014,104 shares of common stock out of the 150,000,000 shares of common stock authorized for issuance as of December 31, 2017.

**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.

**Contractual Obligations**

In the normal course of business, we enter into contracts and commitments that obligate us to make payments in the future. The table below sets forth our significant contractual obligations and related scheduled payments as of December 31, 2017 (in thousands):

| | Total | 2018 | 2019 to 2020 | 2021 to 2022 | 2023 and thereafter |
|---|---|---|---|---|---|
| Operating lease obligations (A) | $ 4,497 | $ 388 | $ 2,538 | $ 1,571 | $ — |
| Total | $ 4,497 | $ 388 | $ 2,538 | $ 1,571 | $ — |

(A) Operating lease obligations are primarily comprised of remaining payments due under the Company's facility leases.

**ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

The primary objective of our investment activities is to preserve our capital for the purpose of funding our operations. To achieve this objective, our investment policy allows us to maintain a portfolio of cash, cash equivalents, and short-term investments in a variety of securities, including money market funds. Our primary exposure to market risk is interest income sensitivity, which is

affected by changes in the general level of U.S. interest rates, particularly because the majority of our investments are comprised of cash and cash equivalents. We currently do not hedge interest rate exposure. Due to the nature of our short-term investments, we believe that we are not subject to any material market risk exposure. We have limited foreign currency risk exposure as our business operates primarily in U.S. dollars. We do not have any significant foreign currency or other derivative financial instruments.

## ITEM 4. CONTROLS AND PROCEDURES

### Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial and accounting officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Exchange Act) as of the end of the period covered by this report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the quarterly period covered by this report were designed and operating effectively.

### Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) that occurred during the fiscal quarter to which this report relates that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

### Inherent Limitations on Effectiveness of Controls

Our management, including our Chief Executive Officer and our Chief Financial Officer, do not expect that our disclosure controls or our internal control over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of controls effectiveness to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

## PART II—OTHER INFORMATION

### ITEM 1. LEGAL PROCEEDINGS

See Note 3 of the Notes to the Unaudited Condensed Consolidated Financial Statements within this Form 10-Q for a discussion of our legal proceedings and contingencies.

### ITEM 1A. RISK FACTORS

*In evaluating the Company and an investment in our common stock, we urge you to carefully consider the risks and other information in this Quarterly Report on Form 10-Q as well as the risk factors disclosed in our Annual Report on Form 10-K for the fiscal year ended March 31, 2017, filed with the Securities and Exchange Commission on June 7, 2017. There have been no material changes from the risk factors as previously disclosed in our Annual Report on Form 10-K. Any of the risks discussed in this Quarterly Report on Form 10-Q and in our Annual Report on Form 10-K, as well as additional risks and uncertainties not currently known to us or that we currently deem immaterial, could materially and adversely affect our results of operations or financial condition.*

### ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

### ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

### ITEM 4. MINE SAFETY DISCLOSURE

Not applicable.

### ITEM 5. OTHER INFORMATION

None.

**ITEM 6. EXHIBITS**

The following exhibit index shows those exhibits filed with this report and those incorporated herein by reference:

| Exhibit No. | Description |
|---|---|
| 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 | 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 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 19, 2012) |
| 4.3 | 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 19, 2012) |
| 31.1 | Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.* |
| 31.2 | Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.* |
| 32.1 | Certification pursuant to 18 U.S.C. Section 1350.* |
| 101 | Interactive Data File* |

* Filed herewith.

**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, thereunto duly authorized.

**ORGANOVO HOLDINGS, INC.**

Date: February 8, 2018

By: */s/ Taylor Crouch*
Name: Taylor Crouch
Title: Chief Executive Officer and President
(Principal Executive Officer)

Date: February 8, 2018

By: */s/ Craig Kussman*
Name: Craig Kussman
Title: Chief Financial Officer
(Principal Financial Officer)

**Exhibit 31.1**

**CERTIFICATION**

I, Taylor Crouch, Chief Executive Officer and President of Organovo Holdings, Inc. (the "Registrant"), certify that:

1. I have reviewed this quarterly report on Form 10-Q of the Registrant;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the consolidated financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting

Dated: February 8, 2018

/s/ Taylor Crouch
Taylor Crouch
Chief Executive Officer and President
(Principal Executive Officer)

**Exhibit 31.2**

**CERTIFICATION**

I, Craig Kussman, Chief Financial Officer of Organovo Holdings, Inc. (the "Registrant"), certify that:

1. I have reviewed this quarterly report on Form 10-Q of the Registrant;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the consolidated financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting

Dated: February 8, 2018

/s/ Craig Kussman

Craig Kussman
Chief Financial Officer
(Principal Financial Officer)

**Exhibit 32.1**

**CERTIFICATION PURSUANT TO**
**18 U.S.C. SECTION 1350,**
**AS ADOPTED PURSUANT TO**
**SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of Organovo Holdings, Inc. (the "Company") for the period ended December 31, 2017, as filed with the Securities and Exchange Commission (the "Report"), I, Taylor Crouch, Chief Executive Officer and President and I, Craig Kussman, Chief Financial Officer of the Company hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- The information in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 8, 2018

/s/ Taylor Crouch
Taylor Crouch
Chief Executive Officer and President
(Principal Executive Officer)

/s/ Craig Kussman
Craig Kussman
Chief Financial Officer
(Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to Organovo Holdings, Inc. and will be retained by Organovo Holdings, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies the Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission, and is not to be incorporated by reference into any filing of Organovo Holdings, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.