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

SCHEDULE 14A

**Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934
(Amendment No.)**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only** (as permitted by Rule 14a-6(e)(2))
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

Organovo Holdings, Inc.

(Name of Registrant as Specified In Its Charter)

Not Applicable

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

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

(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

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

July 8, 2016

Dear Stockholder:

You are cordially invited to attend this year's annual meeting of stockholders of Organovo Holdings, Inc. on Wednesday, August 17, 2016 at 9:00 a.m. (local time). The meeting will be held at Green Acre Campus Pointe, 10300 Campus Point Drive, San Diego, California 92121.

We are pleased to furnish proxy materials primarily over the internet based on the rules established by the Securities and Exchange Commission (the "SEC"). We believe this will allow us to quickly provide proxy materials to you, while lowering the costs of distribution and reducing the environmental impact of our annual meeting.

On July 8, 2016, we mailed a Notice of Internet Availability of Proxy Materials (the "Notice") to our stockholders (other than those who previously requested electronic or paper delivery) containing instructions on how to access our proxy materials, including our Proxy Statement and Annual Report to Stockholders for the fiscal year ended March 31, 2016, over the internet. The Notice also provides instructions on how to vote online or by telephone and includes instructions on how you can receive a paper copy of the proxy materials by mail. If you receive your proxy materials by mail, the Annual Report, the Notice of 2016 Annual Meeting of Stockholders, the Proxy Statement, and proxy card will be enclosed.

The matters to be acted upon are described in the Notice of 2016 Annual Meeting of Stockholders and Proxy Statement. Following the formal business of the meeting, we will report on our operations and respond to questions from stockholders.

Whether or not you plan to attend the meeting, your vote is very important and we encourage you to vote promptly. You may vote by proxy over the internet or by telephone, or, if you received paper copies of the proxy materials by mail, you can also vote by mail by following the instructions on your proxy card. If you attend the meeting you will have the right to revoke your proxy and vote your shares in person. If you hold your shares through an account with a brokerage firm, bank or other nominee, please follow the instructions you receive from your brokerage firm, bank or other nominee to vote your shares.

We look forward to seeing you at the annual meeting.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Keith Murphy". The signature is fluid and cursive, written over a light gray background.

Keith Murphy
*Chairman of the Board, Chief Executive Officer, President,
Principal Financial Officer and Principal Accounting Officer*

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**ORGANOVO HOLDINGS, INC.
NOTICE OF 2016 ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON AUGUST 17, 2016**

To Our Stockholders:

The 2016 Annual Meeting of Stockholders (the “Annual Meeting”) of Organovo Holdings, Inc. (“Organovo” or the “Company”) will be held at Green Acre Campus Pointe, 10300 Campus Point Drive, San Diego, California 92121 on Wednesday, August 17, 2016 at 9:00 a.m. (local time) for the following purposes:

1. To elect Tamar Howson as a Class II Director to hold office until the 2019 Annual Meeting of Stockholders and until her successor is elected and qualified;
2. To ratify the appointment of Mayer Hoffman McCann P.C. as our independent registered public accounting firm for the fiscal year ending March 31, 2017;
3. To hold a non-binding advisory vote on the compensation of our named executive officers;
4. To approve our 2016 Employee Stock Purchase Plan; and
5. To transact such other business as may properly be brought before the Annual Meeting or any adjournments or postponements thereof.

Our Board of Directors recommends a vote **FOR** our director nominee and **FOR** proposals 2, 3 and 4 listed above. Stockholders of record at the close of business on June 20, 2016 are entitled to notice of, and to vote on, all matters at the meeting and any reconvened meeting following any adjournments or postponements thereof. For ten days prior to the Annual Meeting, a complete list of stockholders entitled to vote at the Annual Meeting will be available for examination by any stockholder, for any purpose relating to the Annual Meeting, during ordinary business hours at our corporate offices located at 6275 Nancy Ridge Dr., Suite 110, San Diego, California 92121.

All stockholders are invited to attend the Annual Meeting in person. Whether or not you expect to attend the Annual Meeting, you are urged to vote or submit your proxy as soon as possible so that your shares can be voted at the Annual Meeting in accordance with your instructions. Telephone and internet voting are available. For specific instructions on voting, please refer to the instructions in the Notice of Internet Availability of Proxy Materials or the proxy card. If you hold your shares through an account with a brokerage firm, bank or other nominee, please follow the instructions you receive from them to vote your shares.

Important Notice Regarding Availability of Proxy Materials for the Annual Meeting: Our Notice of 2016 Annual Meeting of Stockholders, Proxy Statement and Annual Report are available at www.proxydocs.com/onvo.

By Order of the Board of Directors



Keith Murphy
*Chairman of the Board, Chief Executive Officer, President,
Principal Financial Officer and Principal Accounting Officer*

July 8, 2016



2016 Proxy Statement Summary

To assist you in reviewing the Proxy Statement for the Organovo Holdings, Inc. (“Organovo” or the “Company”) 2016 Annual Meeting of Stockholders (the “Annual Meeting”), we call your attention to the following summary information about the Annual Meeting and the proposals to be considered at the Annual Meeting. For more complete information, please review our Proxy Statement and Annual Report for the fiscal year ended March 31, 2016. We encourage you to vote your shares at the Annual Meeting. If you are unable to attend the Annual Meeting in person, we encourage you to submit a proxy so that your shares will be represented and voted.

Annual Meeting of Stockholders

Date and Time:	August 17, 2016 at 9:00 a.m. (local time)
Place:	Green Acre Campus Pointe, 10300 Campus Point Drive, San Diego, California 92121
Record Date:	June 20, 2016
Voting:	If you were a “stockholder of record” or beneficial owner of shares held in “street name” as of the Record Date, you may vote your shares. You may vote in person at the Annual Meeting or by the internet, telephone or mail. See the “General Information – Voting Instructions” in the Proxy Statement for more detail regarding how you may vote your shares.
Admission:	You are entitled to attend the Annual Meeting if: (i) you were an Organovo stockholder as of the Record Date (or you are attending as a named representative of a stockholder or you are an immediate family member attending as a guest of a stockholder); and (ii) you present proof of ownership of Organovo common stock as of the Record Date. In addition, all stockholders, immediate family member guests and representatives will be required to present government-issued photo identification (e.g., driver’s license or passport) to gain admission to the Annual Meeting. Please note that if your shares are held of record by a broker, bank, trustee, or nominee and you wish to vote at the Annual Meeting, you will not be permitted to vote in person unless you first obtain a proxy issued in your name from the broker, bank, trustee or nominee.

Please be advised that all purses, briefcases, bags, etc. may be subject to inspection. The use of mobile phones, pagers, recording or photographic equipment, tablets and/or computers is not permitted in the meeting room during the Annual Meeting.

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Proposals and Voting Recommendations

	<u>Board Vote Recommendation</u>	<u>Page References (for more detail)</u>
Proposals:		
(1) Election of Tamar Howson as a Class II director to hold office until the 2019 Annual Meeting of Stockholders and until her successor is elected and qualified.	FOR	34
(2) Ratification of appointment of Mayer Hoffman McCann P.C. as our independent registered public accounting firm for the fiscal year ending March 31, 2017.	FOR	35
(3) Non-binding advisory vote on the compensation of our named executive officers.	FOR	38
(4) Approval of our 2016 Employee Stock Purchase Plan.	FOR	39

Corporate Governance Summary Facts

The following table summarizes our current Board structure and key elements of our corporate governance framework:

Size of Board	6
Number of Independent Directors	5
Chairman and CEO	Combined
Lead Independent Director	Yes
Board Self-Evaluation	Annual
Review of Independence of Board	Annual
Independent Directors Meet Without Management Present	Yes
Annual Director Elections	No
Voting Standard for Election of Directors in Uncontested Elections	Plurality
Diverse Board (as to background, experience and skills)	Yes

Proposal 1: Director Nominee

The following table provides summary information about the director nominated for election to serve as a Class II director to hold office until the 2019 Annual Meeting of Stockholders:

<u>Name</u>	<u>Age</u>	<u>Director Since</u>	<u>Principal Occupation</u>	<u>Experience/Qualifications</u>	<u>Current Committee Membership</u>	<u>Independent?</u>
Tamar Howson	67	2013	Board Member and Corporate Business Development and Strategy Consultant to biotech companies	<ul style="list-style-type: none"> • Leadership • Industry • Strategy 	<ul style="list-style-type: none"> • Compensation, Audit, and Nominating Committees 	Yes

Proposal 2: Ratification of Auditors

As a matter of good corporate governance, we are asking our stockholders to ratify the Audit Committee's selection of Mayer Hoffman McCann P.C. as our independent registered public accounting firm for the fiscal year ending March 31, 2017. Mayer Hoffman McCann P.C. has served as our independent registered public accounting firm since February 2012.

Proposal 3: Advisory Vote to Approve Compensation of Named Executive Officers

We are asking our stockholders to provide an advisory vote relating to the compensation of our named executive officers. Our Compensation Committee has designed our executive compensation program to attract and retain talented executives, to motivate them to achieve our key financial, operational and strategic goals, and to reward them for superior performance. Our executive compensation program is also intended to align our executive officers' interests with those of our stockholders by rewarding their achievement of the specific corporate and individual goals set by our Compensation Committee. Our corporate performance goals are focused on achieving our commercialization and revenue targets, securing significant collaborative arrangements, advancing our product and technology platform, developing a sustainable operating plan and increasing long-term stockholder value. Our stockholders have demonstrated strong support for our executive compensation program by casting approximately 95% of their votes in favor of our "say-on-pay" proposal related to our Fiscal 2015 executive compensation, and we retained the design of our Fiscal 2015 executive compensation program for Fiscal 2016.

For Fiscal 2016, the compensation of our named executive officers consisted of a base salary, a performance-based cash bonus award contingent on the achievement of corporate and individual performance goals and a time-based stock option award under our long-term equity award program. The Compensation Committee evaluates the base salaries of our executive officers annually based on the Company's overall performance during the prior fiscal year; the executive officer's responsibilities; each executive officer's individual performance and contribution to the achievement of the prior year's corporate goals; and relevant market data from a peer group selected by the Compensation Committee. Our performance-based cash bonuses are awarded based upon the achievement of corporate and individual performance goals evaluated and approved by our Compensation Committee. Our named executive officers achieved annual bonuses ranging between 17.5% and 34.5% of their respective base salaries based on the achievement of the corporate and individual performance goals set for Fiscal 2016. These bonus amounts were less than the target bonus award opportunities established by the Compensation Committee for our executive officers because the Company did not achieve all of the corporate performance goals established by the Compensation Committee. Our long-term equity-based awards consisted of stock options to purchase shares of our common stock that vest over a four-year period and with an exercise price set at the fair market value of the Company's common stock on the date of grant. Our Compensation Committee determined that stock options with a four-year vesting term and an exercise price set at the grant date fair market value provide our executive officers with an incentive to continue to focus on the Company's long-term financial performance and increasing stockholder value.

Performance and Incentive Based. Our executive compensation program focuses on creating alignment between our stockholders and executive officers by including both performance and incentive-based compensation elements. Under our performance-based cash bonus plan, our executive officers are eligible for an annual cash bonus based on a percentage of their base salaries and conditioned upon their achievement of corporate and individual performance goals evaluated and approved by our Compensation Committee. In addition, under our long-term equity incentive plan, our executive officers receive stock options to purchase shares of our common stock with an exercise price equal to the fair market value of our common stock on the date of grant. The stock options vest over a four-year period. Because the stock options have a set exercise price, these awards do not have any value unless the Company's stock price increases over the four-year vesting period. The price of the Company's common stock as of the date of the Proxy Statement is currently lower than the exercise price of the stock option awards granted to our executive officers in Fiscal 2016. As a result, our executive officers have not realized any value from these awards to date, and the grant date fair value reported in the Summary

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Compensation Table in the Proxy Statement does not accurately reflect the compensation actually delivered to our executive officers from the Fiscal 2016 stock option awards.

Table 1 below illustrates that a significant percentage of the target total direct compensation (“TTDC”) offered to our executive officers listed below for Fiscal 2016 consisted of performance and incentive based compensation. Although the Company did not specifically target a TTDC level in any formulaic manner, the TTDC level for each of the executive officers below (other than Ms. Bush), including the grant date fair value of the Fiscal 2016 stock option awards, benchmark below the median TTDC level for the executive officers in our peer group of comparison companies based on a study the Compensation Committee received from its independent compensation consultant in November 2015.

Table 1 – TTDC for Fiscal 2016 – Named Executive Officers Continuing with the Company after Fiscal Year-End

Executive Officer	Salary (\$)	Target Performance- Based Cash Bonus (\$)	Incentive Based Option Awards (\$)(1)	TTDC (\$)	TTDC Subject to Performance Goals or Incentive Based (\$)	TTDC Subject to Performance Goals or Incentive Based (%)
Keith Murphy	\$500,000	\$ 250,000	\$ 1,529,378	\$2,279,378	\$ 1,779,378	78%
Sharon Presnell, Ph.D.	\$350,000	\$ 122,500	\$ 418,711	\$ 891,211	\$ 541,211	61%
Eric David, MD, JD	\$325,000	\$ 113,750	\$ 418,711	\$ 857,461	\$ 532,461	62%
Jennifer Kinsbruner Bush, JD	\$325,000	\$ 113,750	\$ 402,607	\$ 841,357	\$ 516,357	61%

(1) Represents the grant date fair value of the stock option awards, calculated in the same manner as reported in the Summary Compensation Table included in this Proxy Statement.

In the tables that follow, we compare the TTDC offered to our chief executive officer, Keith Murphy, for the last three full fiscal years (Table 2) to the corresponding amounts that were paid out or that may be considered realized (based on our methodology described below) as of March 31, 2016 (Table 3).

Table 2 presents each component of our chief executive officer’s TTDC for each of the last three full fiscal years. The Option Award amounts presented in Table 2 reflect the grant date fair value of each such award, calculated in the same manner as reported in the Summary Compensation Table included in this Proxy Statement.

Table 2 – TTDC – Chief Executive Officer

Fiscal Year	Salary (\$)	Target Performance- Based Cash Bonus (\$)	Incentive Based Option Awards (\$)(1)	TTDC (\$)(1)
2016	\$ 500,000	\$ 250,000	\$ 1,529,378	\$2,279,378
2015	\$ 465,000	\$ 232,500	\$ 117,836	\$ 815,336
2014	\$ 365,000	\$ 135,050	\$ 4,190,665	\$4,690,715
3-Year Total	\$1,330,000	\$ 617,550	\$ 5,837,879	\$7,785,429

(1) The Compensation Committee has historically set the compensation for our executive officers at the beginning of each fiscal year. In March 2013, the Company changed its fiscal year end from December 31st to March 31st. As a result of this change in fiscal year, the Option Award issued to our chief executive officer for purposes of his Fiscal 2015 compensation actually occurred at the end of our newly defined Fiscal 2014 and is reported in Fiscal 2014 in the table above. The Stock Awards reported for Fiscal 2014

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also include stock option awards automatically issued pursuant to the terms of an Equity Incentive Award Agreement the Company entered into with our chief executive officer in August 2012. Thereafter, the Compensation Committee adjusted the timing of setting the compensation of our executive officers to occur after the beginning of our newly defined fiscal year that commences each April 1st. As a result of this change, no annual compensation equity award is reported in Fiscal 2015 for our chief executive officer. The Option Awards reported in the table above for Fiscal 2015 represent stock options issued to our chief executive officer pursuant to the terms of the Equity Incentive Award Agreement. The Option Awards reported for Fiscal 2016 represent our chief executive officer’s long-term equity award for Fiscal 2016.

Table 3 below reflects the realized total direct compensation (“RTDC”) of our chief executive officer for the last three full fiscal years. The RTDC reflects: (i) the actual salary paid to our chief executive officer during the applicable periods, (ii) the actual performance based cash bonuses awarded to our chief executive officer by our Compensation Committee during the applicable periods, and (iii) the intrinsic value of the Options Awards granted to our chief executive officer. We determined the intrinsic value of each of the incentive based Option Awards was zero because the respective exercise prices of the Option Awards exceeded the closing price of our common stock on the NYSE MKT on March 31, 2016.

Our chief executive officer’s RTDC for Fiscal 2016 was only 29% of his TTDC approved by the Compensation Committee because the value of his stock option award adjusted down due to stock price performance and his performance-based cash award was below his target award opportunity because the Company did not satisfy the corporate performance goals established by the Compensation Committee. Further, our chief executive officer’s performance-based cash bonus award in Fiscal 2016 was 30% lower than the award he received in Fiscal 2015, his cash compensation (salary plus actual performance-based cash award) was 6% lower than his cash compensation in Fiscal 2015, and his TTDC and Summary Compensation Table reported Total Direct Compensation (TDC) were both below the median of the compensation offered to the chief executive officers in our compensation peer group.

Table 3 – RTDC as a Percentage of TTDC – Chief Executive Officer

<u>Fiscal Year</u>	<u>Actual Salary (\$)</u>	<u>Actual Performance-Based Cash Bonus (\$)</u>	<u>Intrinsic Value of Incentive Based Option Awards at 3/31/2016 (\$)</u>	<u>RTDC at 3/31/2016 (\$)</u>	<u>RTDC at 3/31/2016 as a Percentage of TTDC (%)</u>
2016	\$ 499,058	\$ 172,000	—	\$ 671,058	29%
2015	\$ 469,897	\$ 246,696	—	\$ 716,593	88%
2014	\$ 362,877	\$ 128,052	—	\$ 490,929	10%
3-Year Total	<u>\$1,331,832</u>	<u>\$ 546,748</u>	<u>—</u>	<u>\$1,875,580</u>	
Comparison to Table 2 Amount (%)	100%	81%	0%	24%	

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Good Compensation Practices. Our executive compensation philosophy and program also reflect our commitment to good compensation governance. The following aspects of our executive compensation program during Fiscal 2016 reinforce this:

Advisory Vote on Executive Compensation	Annual
Independent Compensation Consultant	Yes
Stock Ownership Guidelines	Yes
Compensation Risk Assessment	Annual
Hedging, Pledging and Margin Activities	Prohibited
Contractual Tax Gross Ups	None

Additional information about our compensation philosophy and program, including the compensation determinations for each of our named executive officers, can be found in the “Compensation Discussion and Analysis” commencing on page 18 of the Proxy Statement.

Proposal 4: Approval of our 2016 Employee Stock Purchase Plan

We are asking the Company’s stockholders to approve our 2016 Employee Stock Purchase Plan. Our board of directors determined that the 2016 Employee Stock Purchase Plan benefits the Company and its stockholders by providing Company employees with an opportunity through payroll deductions to purchase shares of our common stock, which is helpful in attracting, retaining, and motivating valued employees. In addition, the board determined that providing our employees with the opportunity to purchase shares of our common stock helps to align their interests with the interests of our stockholders. To provide an adequate reserve of shares and a mechanism to permit the Company to offer employees a stock purchase opportunity, our board of directors has adopted the 2016 Employee Stock Purchase Plan, subject to stockholder approval, and reserved 1,500,000 shares for issuance under the Plan.

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ORGANOVO HOLDINGS, INC.
6275 Nancy Ridge Dr., Suite 110,
San Diego, California 92121

**PROXY STATEMENT FOR THE 2016 ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD AUGUST 17, 2016**

**This Proxy Statement, along with a proxy card,
is being made available to our stockholders on or about July 8, 2016**

GENERAL INFORMATION

We have made these proxy materials available to you in connection with the solicitation by the Board of Directors (the “Board” or “Board of Directors”) of Organovo Holdings, Inc. of proxies to be voted at the 2016 Annual Meeting of Stockholders (the “Annual Meeting”) to be held on Wednesday, August 17, 2016 at Green Acre Campus Pointe, 10300 Campus Point Drive, San Diego, California 92121 at 9:00 a.m. (local time) and at any adjournments or postponements thereof. References in this proxy statement to the “Company,” “we,” “our,” and “us” are to Organovo Holdings, Inc. and its subsidiaries.

In accordance with the rules of the Securities and Exchange Commission (the “SEC”), we are permitted to furnish proxy materials, including this Proxy Statement and our Annual Report for the fiscal year ended March 31, 2016 (the “Annual Report”) to stockholders by providing access to these documents through the internet instead of mailing printed copies. Most stockholders will not receive printed copies of the proxy materials unless requested. Instead, the Notice of Internet Availability of Proxy Materials provides instructions on how to access and review the proxy materials on the internet. The Notice of Internet Availability of Proxy Materials also provides instructions on how to cast your vote via the internet or by telephone. If you would like to receive a printed or email copy of our proxy materials, please follow the instructions for requesting the materials in the Notice of Internet Availability of Proxy Materials.

Record Date

Holders of shares of our common stock, our only class of issued and outstanding voting securities, at the close of business on June 20, 2016 (the “Record Date”) are entitled to vote on the proposals presented at the Annual Meeting. As of June 20, 2016, we had 92,391,989 issued and outstanding shares of common stock.

Quorum

The presence, in person or by proxy, of the holders of a majority of the outstanding shares of common stock entitled to vote at the Annual Meeting is necessary to constitute a quorum for the transaction of business at the Annual Meeting. Votes for and against, abstentions and “broker non-votes” will each be counted as present for purposes of determining the presence of a quorum.

The Annual Meeting may be adjourned or postponed from time to time and at any reconvened meeting, action with respect to the matters specified in this proxy statement may be taken without further notice to stockholders except as required by applicable law and our charter documents.

Stockholders of Record

You are a “stockholder of record” if your shares are registered directly in your name with our transfer agent, Continental Stock Transfer and Trust Company. As a stockholder of record, you have the right to grant your voting proxy directly to the Company or to vote in person at the Annual Meeting. All share represented by a proxy will be voted at the Annual Meeting, and where a stockholder specifies choice with respect to any matter

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to be acted upon, the shares will be voted in accordance with the specification so made. If a stockholder does not indicate a choice on the proxy card, the shares will be voted in favor of the election of the nominee for director contained in this Proxy Statement and in favor of proposals 2, 3 and 4.

Shares Held in Street Name

You are deemed to beneficially own your shares in “street name” if your shares are held in an account at a brokerage firm, bank, broker-dealer, trust or other similar organization. If this is the case, you will receive a separate voting instruction form with this Proxy Statement from such organization. As the beneficial owner, you have the right to direct your broker, bank, trustee, or nominee how to vote your shares, and you are also invited to attend the Annual Meeting. If you hold your shares in street name and do not provide voting instructions to your broker, bank, trustee or nominee, your shares will not be voted on any proposals on which such party does not have discretionary authority to vote (a “broker non-vote”), as further described below under the heading “Broker Non-Votes.”

Please note that if your shares are held of record by a broker, bank, trustee or nominee and you wish to vote at the Annual Meeting, you will not be permitted to vote in person unless you first obtain a proxy issued in your name from the record holder.

Broker Non-Votes

Broker non-votes are shares held by brokers, banks or other nominees who are present in person or represented by proxy, but which are not voted on a particular matter because the brokers, banks or nominees do not have discretionary authority with respect to that proposal and they have not received voting instructions from the beneficial owner. Under the rules that govern brokers, brokers have the discretion to vote on routine matters, but not on non-routine matters. The only routine matter to be considered at the Annual Meeting is the ratification of the appointment of the Company’s independent registered public accountants. The remaining proposals to be considered at the Annual Meeting are considered to be non-routine matters. *As a result, if you do not provide your brokers or nominees with voting instructions on these non-routine matters, your shares will not be voted on these proposals.*

Voting Matters

Stockholders are entitled to cast one vote per share of common stock on each matter presented for consideration by the stockholders. A list of stockholders entitled to vote at the Annual Meeting will be available for examination by any stockholder for a proper purpose during normal business hours at the executive offices of the Company for a period of at least 10 days preceding the day of the Annual Meeting.

There are four proposals scheduled to be voted on at the Annual Meeting:

1. To elect Tamar Howson as a Class II Director to hold office until the 2019 Annual Meeting of Stockholders and until her successor is elected and qualified;
2. To ratify the appointment of Mayer Hoffman McCann P.C. as our independent registered public accounting firm for the fiscal year ending March 31, 2017;
3. To hold a non-binding advisory vote on the compensation of our named executive officers; and
4. To approve our 2016 Employee Stock Purchase Plan.

Our Board of Directors recommends a vote **FOR** our director nominee and **FOR** proposals 2, 3 and 4 listed above.

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We are currently unaware of any matters to be raised at the Annual Meeting other than those referred to in this Proxy Statement. If other matters are properly presented at the Annual Meeting for consideration and you are a stockholder of record and have submitted your proxy, the persons named in your proxy will have the discretion to vote on those matters for you.

Votes Required

Proposal 1 – Election of Director

Under our Certificate of Incorporation and Bylaws, the Class II director will be elected by a plurality of the votes cast in person or by proxy at the Annual Meeting assuming a quorum is present, which means that the director nominee receiving the highest number of “FOR” votes will be elected. If you hold your shares through a broker and you do not instruct the broker on how to vote on this proposal, your broker will not have authority to vote your shares. Abstentions and broker non-votes will each be counted as present for purposes of determining the presence of a quorum, but will not have any effect on the outcome of the proposal.

Proposal 2 – Ratification of Auditors

If a quorum is present, the affirmative vote of a majority of the votes cast at the 2016 Annual Meeting is required for ratification of our independent registered public accounting firm. Abstentions will be counted as present for purposes of determining the presence of a quorum, but will not be considered as votes cast for or against the proposal and will therefore have no effect on the outcome of the vote.

Proposal 3 – Advisory Vote on Named Executive Officer Compensation

If a quorum is present, the proposal to approve, on an advisory basis, the compensation of the Company’s named executive officers requires the affirmative vote of a majority of the votes cast at the 2016 Annual Meeting. Abstentions and broker non-votes will each be counted as present for purposes of determining the presence of a quorum. Abstentions and broker non-votes will not be considered as votes cast for or against the proposal and will therefore have no effect on the outcome of the vote.

Proposal 4 – Adoption of Our 2016 Employee Stock Purchase Plan

If a quorum is present, the affirmative vote from the holders of a majority of the outstanding shares of common stock present in person or represented by proxy at the Annual Meeting is required to approve the 2016 Employee Stock Purchase Plan. Abstentions and broker non-votes will have the same effect as an “Against” vote on this proposal.

Voting Instructions

If you are a stockholder of record, you can vote in the following ways:

- **By Internet:** by following the internet voting instructions included on Notice of Internet Availability of Proxy Materials and the proxy card at any time up until 11:59 p.m., Eastern Time, on August 16, 2016.
- **By Telephone:** by following the telephone voting instructions included on Notice of Internet Availability of Proxy Materials and the proxy card at any time up until 11:59 p.m., Eastern Time, on August 16, 2016.
- **By Mail:** you may vote by mail by marking, dating and signing your proxy card in accordance with the instructions on it and returning it by mail in the pre-addressed reply envelope provided with the proxy materials. The proxy card must be received prior to the Annual Meeting.

You may also vote your shares in person at the Annual Meeting. Even if you plan to attend the Annual Meeting, we encourage you to vote in advance by internet, telephone or mail so that your vote will be counted in the event you later decide not to attend the Annual Meeting.

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If your shares are held in street name, please follow the separate voting instructions you receive from your broker, bank, trustee or other nominee.

Proxies

All shares represented by a proxy will be voted, and where a stockholder specifies a choice with respect to any matter to be acted upon, the shares will be voted in accordance with the specification so made. If a stockholder does not indicate a choice on the proxy card, the shares will be voted in favor of the election of the nominee for director contained in this Proxy Statement, in favor of ratifying Mayer Hoffman McCann P.C. as the Company's independent registered public accounting firm for the fiscal year ended March 31, 2017, in favor of the non-binding advisory vote on the compensation of our named executive officers, in favor of the approval of our 2016 Employee Stock Purchase Plan and in the discretion of the proxy holders on any other matter that comes before the meeting.

If your shares are held by a broker, bank or other stockholder of record, in nominee name or otherwise, exercising fiduciary powers (typically referred to as being held in "street name"), you may receive a separate voting instruction form with this Proxy Statement. Your broker may vote your shares on the proposal to ratify our independent auditors, but will not be permitted to vote your shares with respect to the election of director or on any of the other proposals unless you provide instructions as to how to vote your shares. Please note that if your shares are held of record by a broker, bank or nominee and you wish to vote at the meeting, you will not be permitted to vote in person unless you first obtain a proxy issued in your name from the record holder.

Proxy Revocation Procedure

If you are a stockholder of record, you may revoke your proxy: (i) by written notice of revocation mailed to and received by the Secretary of the Company prior to the date of the Annual Meeting, (ii) voting again via the internet or by telephone at a later time before the closing of those voting facilities at 11:59 p.m. (Eastern) on August 16, 2016, (iii) by executing and delivering to the Secretary a proxy dated as of a later date than a previously executed and delivered proxy (provided, however, that such action must be taken prior to 11:59 p.m. (Eastern Time) on August 16, 2016), or (iv) by attending the Annual Meeting and voting in person. Attendance at the Annual Meeting will not in and of itself revoke a proxy.

If your shares are held by a bank, broker or other agent, you may change your vote by submitting new voting instructions to your bank, broker or other agent, or, if you have obtained a legal proxy from your bank, broker or other agent giving you the right to vote your shares, by attending the Annual Meeting and voting in person.

Voting Results

We will announce preliminary voting results at the Annual Meeting. We will report final results in a Form 8-K report filed with the Securities and Exchange Commission.

BOARD OF DIRECTORS INFORMATION

Presently, our Board of Directors is comprised of six directors. Our Board is divided into three classes, with one class standing for election each year for a three-year term. There are two Class I directors, two Class II directors, and two Class III directors. The Class II directors are Tamar Howson and Richard Heyman, Ph.D., whose terms will expire at the Annual Meeting. Robert Baltera, Jr. and James Glover are our Class III directors, whose terms will expire at our 2017 Annual Meeting of Stockholders. Keith Murphy, our Chairman, Chief Executive Officer, President, Principal Financial Officer and Principal Accounting Officer and Kirk Malloy, Ph.D., are our Class I directors whose terms will expire at our 2018 Annual Meeting of Stockholders.

The Board, based on the recommendation of the Nominating and Corporate Governance Committee, has nominated Tamar Howson for election at the Annual Meeting as a Class II director, for a three-year term expiring at the 2019 Annual Meeting of Stockholders. Directors are elected by a plurality of the votes cast at the Annual Meeting, which means that the director nominee receiving the highest number of “FOR” votes will be elected as a Class II director. Ms. Howson has indicated her willingness to serve if elected, but if she should be unable or unwilling to stand for election, the shares represented by proxies may be voted for a substitute as the Board may designate, unless a contrary instruction is indicated in the proxy. On July 5, 2016, Dr. Heyman announced his plans to retire from the Board, effective immediately prior to the commencement of the Annual Meeting. Dr. Heyman’s decision to retire did not result from a disagreement with the Company on any matter relating to the Company’s operations, policies or practices. Dr. Heyman expressed his intention to retire from the Board to allow him to spend more time pursuing his duties to the private biotechnology companies he recently formed.

In addition to the information set forth below regarding our directors and our director candidates and the skills that led our Board to conclude that these individuals should serve as directors, we also believe that all of our directors and our director nominee have a reputation for integrity, honesty and adherence to the highest ethical standards. We believe they each have demonstrated business acumen and an ability to exercise sound judgment, as well as a commitment of service to our Company and our Board.

Our Board of Directors

The following sets forth information regarding the business experience of our current directors and our director nominee as of July 8, 2016:

<u>Name</u>	<u>Age</u>	<u>Position(s)</u>
Keith Murphy	44	Chairman of the Board, Chief Executive Officer, President, Principal Financial Officer, Principal Accounting Officer and Director
Kirk Malloy, Ph.D.	49	Director
James Glover	66	Director
Tamar Howson	67	Director and Director Nominee
Robert Baltera, Jr.	51	Lead Director
Richard A. Heyman, Ph.D.	59	Director

Nominee for Election as a Class II Director for a Term Expiring at the 2019 Annual Meeting of Stockholders

Tamar Howson, Director and Director Nominee, joined our Board in June 2013. Ms. Howson has served as a corporate business development and strategy consultant to biopharmaceutical companies since 2011. From 2009 to 2011, she served as a member of the transaction advisory firm, JSB-Partners, providing business development support to life sciences companies. From 2007 to 2008, Ms. Howson served as Executive Vice President, Corporate Business Development at Lexicon Pharmaceuticals, a biotech company. Prior to joining Lexicon Pharmaceuticals, Ms. Howson served as Senior Vice President, Corporate and Business Development at Bristol-Myers Squibb and SmithKline Beecham plc. Ms. Howson currently serves on the board of directors of Cynapsus Therapeutics Inc. and Enzymotec PLC. During the prior five years, Ms. Howson served as a director of the following publicly traded companies: Actavis plc; Idenix Pharmaceuticals Inc.; OXiGENE, Inc., Soligenix, Inc., Warner Chilcott plc and Cardax, Inc. In addition, Ms. Howson serves as a director of the International Partnership for Microbicides, a non-profit product development partnership. She previously served on the boards

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of Aradigm, S*BIO, Ariad Pharmaceuticals, SkyePharma, NPS Pharma, Targacept, and HBA. Ms. Howson holds an MBA from Columbia University, a MS from City University of New York, and a BS in Chemical Engineering from the Technion, Israel.

Ms. Howson's extensive experience in the pharmaceutical and biotech industries, including as a corporate business development and strategy consultant to biopharmaceutical companies and as a senior professional at leading pharmaceutical companies, including Bristol-Myers Squibb and SmithKline Beecham, and her past and current service on the boards of directors of other public and private companies qualify her to be a member of our Board of Directors.

Class III Directors Continuing in Office until the 2017 Annual Meeting of Stockholders

James T. Glover, Director, joined us in July 2012. Mr. Glover was the Senior Vice President, Operations and Chief Financial Officer of Anadys Pharmaceuticals, Inc., a publicly-held biopharmaceutical company acquired by Hoffmann-La Roche Inc., from 2006 to 2009. From 1989 to 2006, he served at Beckman Coulter, Inc., a leading biomedical testing instruments company, most recently as Senior Vice President and Chief Financial Officer. Mr. Glover served as a director of Varian, Inc., a publicly-traded scientific instruments company purchased by Agilent Technologies, and was Varian's audit committee chairman. Mr. Glover received his BS in accounting from California State Polytechnic University and his MBA from Pepperdine University. Mr. Glover attended the Director Education and Certification program at the University of California, Los Angeles and passed the certification exam. Mr. Glover is a certified public accountant (CPA) and a chartered global management accountant (CGMA).

Mr. Glover's previous service as a Chief Financial Officer for a number of public companies, his past and current Board experience on a number of public companies and his finance and accounting expertise and experience qualify him to be a member of our Board of Directors.

Robert Baltera, Jr., Lead Director, joined us as a director in October 2009 and has served as our Lead Director since June 2014. Since January 2016, Mr. Baltera has served as an entrepreneur-in-residence at the venture capital firm of Frazier Healthcare Partners and is chief executive officer of Hawkeye Therapeutics, a company funded by Frazier Healthcare. From February 2015 until December 2015, Mr. Baltera served as Chief Executive Officer and a member of the board of directors of Laguna Pharmaceuticals, a privately-funded biotechnology company. Mr. Baltera was the Chief Executive Officer of Amira Pharmaceuticals, a private pharmaceutical development company, a position he held from July 2007 through September 2011. Amira was sold to Bristol-Myers Squibb in September 2011 for \$325 million in cash, plus additional milestone payments of up to \$150 million. Before becoming Amira's Chief Executive Officer, he held a number of senior management positions at Amgen Inc., a publicly-held biopharmaceutical company, the last being Vice President of Corporate and Contract Manufacturing. During his service at Amgen, he was instrumental in focusing the company's development efforts, strengthening and developing its pipeline and forging key collaborations with partners such as GlaxoSmithKline. He also served as Amgen's team leader responsible for the approval of Kineret® in rheumatoid arthritis. Mr. Baltera currently serves on the board of directors of Xencor, Inc., a publicly-held biotechnology development company, and also serves on the board of directors of the following private companies: Panmira Pharmaceuticals, LLC, FLAP, LLC, and Ruga Corporation, as well as an industry group, the San Diego Venture Group. Mr. Baltera holds an M.B.A. from the Anderson School at the University of California, Los Angeles and earned a B.S. in Microbiology and an M.S. in Genetics from The Pennsylvania State University. Mr. Baltera attended the Director Education and Certification program at the University of California, Los Angeles.

Mr. Baltera's previous executive leadership and product development experience at Amira and Amgen, his past and current service on the boards of directors of other public and private companies, as well as his educational background qualify him to be a member of our Board of Directors.

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Class I Directors Continuing in Office until the 2018 Annual Meeting of Stockholders

Keith Murphy, Chairman of the Board, Chief Executive Officer, President, Principal Financial Officer, Principal Accounting Officer and Director, is one of the Company's founders and has served as our President, Chief Executive Officer and Chairman since joining the Company in July 2007, and since April 2016, has served as our Principal Financial Officer and Principal Accounting Officer. Mr. Murphy previously served at Alkermes, Inc., a biotechnology company, from July 1993 to July 1997, where he played a role on the development team for their first approved product, Nutropin (hGH) Depot. He moved to Amgen, Inc. in August 1997, where he worked on the development of several other novel formulation and device products. He has over 21 years of experience in biotechnology, including serving in Product Strategy and Director of Process Development roles at Amgen through July 2007. He was previously Global Operations Leader for the osteoporosis/bone cancer drug Prolia/Xgeva (denosumab), the development of which involved several indications across multiple global Phase 3 studies, and which now has annual revenues approaching \$2.5 billion per year. He holds a BS in Chemical Engineering from MIT, and is an alumnus of the UCLA Anderson School of Management.

Mr. Murphy's previous experience in the biotechnology field, especially in developing novel products, his experience and expertise with our 3D bioprinting technology and product development opportunities and strategy, and his educational experience qualify him to be a member of our Board of Directors.

Kirk Malloy, Ph.D., Director, joined our board in December 2014. Dr. Malloy has held management and executive leadership positions in rapidly growing life science and diagnostic companies for 20 years. He is currently an independent consultant for life science companies and serves as an independent director for public and private companies, including igenomx and Edico Genome. He was most recently the Senior Vice President and General Manager of the Life Sciences and Applied Markets Business of Illumina, Inc., a position he held from January 2014 to April 2016. The Life Sciences Business is Illumina's largest business unit, with annual revenues greater than \$1 billion. Dr. Malloy joined Illumina in 2002, and served in a number of executive leadership positions, including Vice President, Global Customer Solutions from 2007 to 2013, Vice President, Global Quality from 2005 to 2007 and Senior Director, Global Customer Solutions from 2002 to 2005. Prior to joining Illumina, Dr. Malloy held commercial leadership positions at Biosite, Inc. and commercial management positions at Qiagen, Inc. Before joining the industry, Dr. Malloy spent several years as an academic scientist teaching and conducting research. Dr. Malloy received his B.S. degrees in Biology and Marine Science from the University of Miami, College of Arts & Sciences and his M.S. and Ph.D. degrees in Marine Biology/Biochemistry from the University of Delaware, College of Earth, Ocean and Environment and held post-doctoral positions at Boston University and Northeastern University. He completed a certification for Corporate Directors at UCLA's Anderson School in 2012. Dr. Malloy has 12 peer-reviewed publications and book chapters, dozens of invited and contributed scientific presentations and has been a reviewer for various scientific journals.

Dr. Malloy's managerial and leadership experience at Illumina and other publicly-traded biotechnology companies, including his many years of experience in managing and supervising the commercialization of biotechnology products permit him to contribute valuable strategic management insight, and qualify him to be a member of our Board of Directors.

Class II Director Retiring at the 2016 Annual Meeting of Stockholders

Richard A. Heyman, Ph.D., Director, joined our Board in August 2013. Dr. Heyman has served as the Executive Chairman of Metacrine, Inc., a private company targeting metabolic disease through advances in endocrine research, since June 2015. He has also served on the Board of Directors of ORIC Pharmaceuticals, a private company focused on the discovery and development of novel therapies for treatment-resistant cancers, since November 2014, and from October 2015 to June 2016 served as its Interim Chief Executive Officer. From August 2013 to April 2015, he served as the Chief Executive Officer of Seragon Pharmaceuticals, Inc., a private biotechnology company focused on developing Selective Estrogen Receptor Degraders (SERDs) targeting hormone dependent cancers, which was acquired by Genentech in August 2014 for \$725 million in cash and \$1.0 billion in contingent development milestones. Prior to joining Seragon, Dr. Heyman served as the Chief Executive Officer of Aragon Pharmaceuticals, which he cofounded in 2009 and was acquired by Johnson and

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Johnson in August 2013 for \$650 million in cash and \$350 million in contingent development milestones. Previously, he cofounded and served as Chief Scientific Officer of X-Ceptor Therapeutics, a company that developed compounds targeting nuclear receptors for the treatment of metabolic diseases, which was acquired by Exelixis in 2004. Prior to X-Ceptor, he held various roles at Ligand Pharmaceuticals, last serving as Vice President of Research, where he served as project leader for multiple discovery programs, including the successful identification and development of Panretin® and Targretin®, retinoids approved by the FDA for the treatment of cancer. He is the author or inventor on more than 120 publications and patents. He was an NIH postdoctoral fellow and staff scientist at the Salk Institute, working with Dr. Ronald Evans. Dr. Heyman received a Ph.D. in pharmacology from the University of Minnesota and a BS in chemistry from the University of Connecticut.

Dr. Heyman's previous executive leadership experience in the biotechnology field, especially in leading companies focused on identifying and developing novel drugs, and his educational experience qualify him to be a member of our Board of Directors.

No Family Relationships

There are no family relationships between any of our officers and directors.

Board Committees

	<u>Compensation Committee</u>	<u>Audit Committee</u>	<u>Nominating and Corporate Governance Committee</u>	<u>Science and Technology Committee</u>
Keith Murphy	—	—	—	X
Kirk Malloy, Ph.D.	X	—	X	X
Tamar Howson	Chair	X	X	—
Richard Heyman, Ph.D.	X	X	—	Chair
James Glover	X	Chair	X	—
Robert Baltera, Jr.	—	X	Chair	X

Compensation Committee. Our Compensation Committee currently consists of Ms. Tamar Howson (Chair), Mr. James Glover and Drs. Richard Heyman and Kirk Malloy. The functions of the Compensation Committee include the approval of the compensation offered to our executive officers and recommending to the full Board the compensation to be offered to our non-employee directors. Additionally, in accordance with the listing standards of the NYSE MKT, the Compensation Committee evaluates the independence of each compensation consultant, outside counsel and advisor retained by or providing advice to the Compensation Committee. The Board has determined that Ms. Howson, Messrs. Glover and Baltera and Drs. Heyman and Malloy are each an "independent director" under the listing standards of the NYSE MKT and the applicable rules and regulations of the SEC. In addition, the members of the Compensation Committee qualify as "non-employee directors" for purposes of Rule 16b-3 under the Exchange Act and as "outside directors" for purposes of Section 162(m) of the Internal Revenue Code of 1986, as amended. The Compensation Committee is governed by a written charter approved by the Board of Directors, a copy of which is available on our website at www.organovo.com.

Audit Committee. Our Audit Committee currently consists of Mr. James Glover (Chair), Ms. Tamar Howson, Mr. Robert Baltera, Jr. and Dr. Richard Heyman. The functions of the Audit Committee include the retention of our independent registered public accounting firm, reviewing and approving the planned scope, proposed fee arrangements and results of the Company's annual audit, reviewing the adequacy of the Company's accounting and financial controls and reviewing the independence of the Company's independent registered public accounting firm. The Board has determined that each member of the Audit Committee is an "independent director" under the listing standards of the NYSE MKT and the applicable rules and regulations of the SEC. The Board has also determined that Ms. Howson, Messrs. Glover and Baltera and Dr. Heyman are each an "audit committee financial expert" within the applicable definition of the SEC. The Audit Committee is governed by a written charter approved by the Board of Directors, a copy of which is available on our website at www.organovo.com.

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Nominating and Corporate Governance Committee. Our Nominating and Corporate Governance Committee currently consists of Mr. Robert Baltera, Jr. (chair), Ms. Tamar Howson, Mr. James Glover and Dr. Kirk Malloy. The functions of the Nominating and Corporate Governance Committee include the identification, recruitment and nomination of candidates for the Board and its committees, making recommendations to the Board concerning the structure, composition and functioning of the Board and its committees (including the reporting channels through which the Board receives information and the quality and timeliness of the information), developing and recommending to the Board corporate governance guidelines applicable to the Company and annually reviewing and recommending changes (as necessary or appropriate), overseeing the annual evaluation of the Board’s effectiveness and performance, and periodically conducting an individual evaluation of each director. The Board has determined that each current and former member of the Nominating and Corporate Governance Committee is an “independent director” under the listing standards of the NYSE MKT and the applicable rules and regulations of the SEC. The Nominating and Corporate Governance Committee is governed by a written charter approved by the Board of Directors, a copy of which is available on our website at www.organovo.com.

Science and Technology Committee. Our Science and Technology Committee currently consists of Dr. Richard Heyman (chair), Messrs. Robert Baltera, Jr. and Keith Murphy and Dr. Kirk Malloy. Our Science and Technology Committee helps oversee the Company’s product development and research and development initiatives. The Science and Technology Committee is governed by a written charter approved by the Board of Directors, a copy of which is available on our website at www.organovo.com.

CORPORATE GOVERNANCE MATTERS

Overview

We are committed to maintaining the highest standards of business conduct and corporate governance, which we believe are fundamental to the overall success of our business, serving our stockholders well and maintaining our integrity in the marketplace. Our Corporate Governance Guidelines and Code of Business Conduct, together with our Certificate of Incorporation, Bylaws and the charters of our Board Committees, form the basis for our corporate governance framework. As discussed below, our Board of Directors has established four standing committees to assist it in fulfilling its responsibilities to the Company and its stockholders: the Audit Committee, the Compensation Committee, the Nominating and Corporate Governance Committee and the Science and Technology Committee. The references to our website address below do not constitute incorporation by reference of the information contained at or available on our website.

Corporate Governance Guidelines

Our Corporate Governance Guidelines are designed to facilitate the effective corporate governance of our Company. Our Corporate Governance Guidelines cover topics including, but not limited to, director qualification criteria, director responsibilities, director compensation, director orientation and continuing education, communications from stockholders to the Board, succession planning and the annual evaluations of the Board and its committees. Our Corporate Governance Guidelines are reviewed regularly by the Nominating and Corporate Governance Committee and revised when appropriate. The full text of our Corporate Governance Guidelines is available on our website at www.organovo.com. A printed copy may also be obtained by any stockholder upon request to our Corporate Secretary.

Code of Business Conduct

We have adopted a Code of Business Conduct that applies to all of our officers, directors, employees and consultants. We have posted a copy of our Code of Business Conduct, and intend to post any amendments to this Code, or any waivers of its requirements, on our website at www.organovo.com, as permitted under the SEC's rules and regulations.

Board Independence

Our shares of common stock are listed for trading on the NYSE MKT. As a result, our Board utilizes the definition of "independence" as that term is defined by the listing standards of the NYSE MKT and the rules and regulations of the SEC, including the rules relating to the independence of the members of our Audit Committee and Compensation Committee. Our Board considers that a director is independent when the director is not an officer or employee of the Company or its subsidiaries, does not have any relationship which would, or could reasonably appear to, materially interfere with the independent judgment of such director, and the director otherwise meets the independence requirements under the listing standards of the NYSE MKT and the rules and regulations of the SEC. Our Board has reviewed the materiality of any relationship that each of our directors has with the Company, either directly or indirectly. Based on this review, our Board has affirmatively determined that Tamar Howson, James Glover, Robert Baltera, Jr., Richard Heyman, Ph.D., and Kirk Malloy, Ph.D. each qualify as "independent" directors within the meaning of the listing standards of the NYSE MKT and the rules and regulations of the SEC.

Board Leadership Structure

Our Bylaws provide our Board with flexibility to combine or separate the positions of Chairman of the Board and Chief Executive Officer in accordance with its determination that utilizing one or the other structure would be in the best interests of our Company and its stockholders. At the current time, our Chairman of the Board, Keith Murphy, also serves as our Chief Executive Officer and President. Our Board has determined that this structure is

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the most effective leadership structure for the Company at this time. The Board believes that Mr. Murphy is the director best situated to identify strategic opportunities and to focus the activities of the Board due to his full-time commitment to the business and his company-specific experience. The Board also believes that the combined role of Chairman and Chief Executive Officer promotes effective execution of strategic imperatives and facilitates information flow between management and the Board. Our Board has determined that maintaining the independence of the Company's directors and managing the composition and function of the Board's committees help maintain the Board's strong, independent oversight of management.

Our Board has also appointed a Lead Director, Mr. Robert Baltera, Jr., as a matter of good corporate governance and believes that the appointment of the Lead Director provides a balance for effective and independent oversight of management. Pursuant to our Bylaws and Corporate Governance Guidelines, the Lead Director is selected annually by the independent non-employee directors. The Lead Director presides at meetings of the non-employee directors, presides at all meetings of the Board at which the Chairman is not present and performs such other functions as the Board may direct, including advising on the selection of Committee chairs and advising management on the agenda for Board meetings. In addition, the Lead Director serves as liaison between the Chairman and the non-employee directors and has the authority to call meetings of the non-employee directors. The non-employee directors meet regularly in executive session without the presence of management or any non-independent directors.

In addition, our Audit, Compensation and Nominating and Corporate Governance Committees, which oversee critical matters such as the integrity of our financial statements, the compensation of executive management, the selection and evaluation of directors, the development and implementation of corporate governance policies, and the oversight of the Company's compliance with laws and regulations, each consist entirely of independent directors. Our Board will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

Board and Committee Attendance

During the fiscal year ended March 31, 2016, all directors attended at least 75% or more of the aggregate of the meetings of the Board and of each of the Board committees on which they served. The Board met four times and acted by written consent two times during the fiscal year ended March 31, 2016; the Audit Committee met four times and did not act by written consent during the fiscal year ended March 31, 2016; the Compensation Committee met five times and acted by written consent two times during the fiscal year ended March 31, 2016; and the Nominating and Corporate Governance Committee met four times and did not act by written consent during the fiscal year ended March 31, 2016.

Director Attendance at the Annual Meeting

We believe the Annual Meeting provides a good opportunity for our directors to hear any feedback that our stockholders may desire to share with the Company and the Board. As a result, we encourage our directors to attend our Annual Meetings. We reimburse our directors for the reasonable expenses they may incur in attending the Annual Meeting.

Executive Sessions

Executive sessions of our independent directors are held at each regularly scheduled meeting of our Board and at other times they deem necessary. The Board's policy is to hold executive sessions without the presence of management, including our President and Chief Executive Officer. Our Board committees also generally meet in executive session at the end of each committee meeting.

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Board Oversight of Risk

Our Board is actively involved in the oversight of risks that could affect our Company. The Board as a whole has responsibility for risk oversight of the Company's risk management policies and procedures, with specific reviews of certain areas being conducted by the relevant Board committee. The Board satisfies this responsibility through reports by each Committee Chair to the Board regarding the Committee's considerations and actions, as well as through regular reports directly from the member or members of management responsible for oversight of particular risks within the Company. Specifically, the Board committees address the following risk areas:

- The Compensation Committee is responsible for overseeing the management of risks related to the Company's executive compensation plans and arrangements.
- The Audit Committee discusses with management the Company's major financial risk exposures, regulatory and compliance matters and the steps management has taken to monitor and control such exposures.
- The Nominating Committee is responsible for overseeing the Company's compliance with good corporate governance practices, including the requirements established by the SEC and NYSE MKT.
- The Science and Technology Committee considers risks related to our research and development initiatives.

The Board encourages management to promote a corporate culture that incorporates risk management into the Company's day-to-day business operations.

Compensation Committee Interlocks and Insider Participation

No member of our Compensation Committee has at any time been our employee. Except as set forth herein, none of our executive officers serves, or has served during the last fiscal year, as a member of the board of directors or compensation committee of any other entity that has one or more executive officers serving as a member of our Board or our Compensation Committee.

Consideration of Director Nominees

General. In evaluating nominees for membership on our Board, our Nominating and Corporate Governance Committee applies the Board membership criteria set forth in our Corporate Governance Guidelines. Under these criteria, the Committee takes into account many factors, including an individual's business experience and skills (including skills in core areas such as operations, management, technology, life sciences industry knowledge, accounting and finance, leadership, strategic planning and international markets), as well as independence, judgment, professional reputation, integrity and ability to represent the best interests of the Company and its stockholders. In addition, the Nominating and Corporate Governance Committee will also consider the ability of the nominee to commit sufficient time and attention to the activities of the Board, as well as the absence of any potential conflicts with the Company's interests. The Nominating and Corporate Governance Committee does not assign specific weights to particular criteria and no particular criterion is necessarily applicable to all prospective nominees. The Board does not have a formal policy with respect to diversity of nominees. Rather, our Nominating and Corporate Governance Committee considers Board membership criteria as a whole and seeks to achieve diversity of occupational and personal backgrounds on the Board. Our Board will be responsible for selecting candidates for election as directors based on the recommendation of the Nominating and Corporate Governance Committee.

Our Nominating and Corporate Governance Committee regularly assesses the appropriate size of our Board, and whether any vacancies on our Board are expected due to retirement or other reasons. In the event that vacancies are anticipated, or otherwise arise, the Committee will consider various potential nominees who may come to the attention of the Committee through current Board members, professional search firms, stockholders or other persons. Each potential nominee brought to the attention of the Committee, regardless of who recommended such potential nominee, is considered on the basis of the criteria set forth in our Corporate Governance Guidelines.

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Stockholder Nominees. The Nominating and Corporate Governance Committee will review a reasonable number of candidates for director recommended by a single stockholder who has held over 0.1% of the Company's common stock for over one year and who satisfies the notice, information and consent provisions set forth in the Company's Bylaws. The Board will use the same evaluation criteria and process for director nominees recommended by stockholders as it uses for other director nominees. A stockholder wishing to formally nominate an individual for election to the Board must do so by following the procedures described in the Company's bylaws. There has been no change to the procedures by which stockholders may recommend nominees to our Board. For information concerning stockholder proposals, see "Stockholder Proposals for the 2017 Annual Meeting" below in this Proxy Statement.

Communications with the Board of Directors

The Board desires that the views of stockholders will be heard by the Board, its Committees or individual directors, as applicable, and that appropriate responses will be provided to stockholders on a timely basis. Stockholders wishing to formally communicate with the Board, the independent directors as a group or any individual director may send communications directly to the Company at 6275 Nancy Ridge Dr., Suite 110, San Diego, California 92121, Attention: Corporate Secretary. All clearly marked written communications, other than unsolicited advertising or promotional materials, are logged and copied, and forwarded to the director(s) to whom the communication was addressed. Please note that the foregoing communication procedure does not apply to (i) stockholder proposals pursuant to Exchange Act Rule 14a-8 and communications made in connection with such proposals or (ii) service of process or any other notice in a legal proceeding.

EXECUTIVE OFFICERS

The following persons are our executive officers and hold the positions set forth opposite their names as of July 8, 2016.

<u>Name</u>	<u>Age</u>	<u>Position</u>
Keith Murphy	44	Chairman of the Board, Chief Executive Officer, President, Principal Financial Officer and Principal Accounting Officer
Sharon Presnell, Ph.D.	47	Chief Scientific Officer
Eric David, MD, JD	48	Chief Strategy Officer and Executive Vice President of Pre-Clinical Development
Jennifer Kinsbruner Bush, JD	41	General Counsel, Corporate Secretary and Compliance Officer
Paul Gallant	51	General Manager

See the section entitled “Board of Directors Information” above, for a description of the business experience and educational background of Mr. Murphy.

Sharon Collins Presnell, Ph.D., Chief Scientific Officer, joined us in May 2011. Dr. Presnell has more than 16 years of experience in the leadership of product-focused R&D. As an Assistant Professor at the University of North Carolina, Dr. Presnell’s research in liver and prostate biology and carcinogenesis produced cell- and tissue-based technologies that were industry-funded or out licensed for industrial applications. She joined Becton Dickinson & Co. (BD) in 2001, and played a key role in the early discovery and development of cell-based tools and reagent for BD’s life science portfolio. At BD, she grew and led a large multi-disciplinary team to build and validate screening platforms and products for cell growth, differentiation, and characterization and secured revenue-generating commercial partnerships with pharma partners. Dr. Presnell joined Tengion, Inc. in 2007, and as the Senior Vice President of Regenerative Medicine Research, was responsible for leading the discovery and early development of Tengion’s Neo-Kidney Augment™, a clinical-stage cell-based therapy for patients with chronic kidney disease. As the Chief Scientific Officer at Organovo, Dr. Presnell has led the growth and development of the R&D organization, including evolution of the Company’s technology portfolio, and has played an instrumental role in securing funds in support of corporate growth initiatives. Dr. Presnell holds a Ph.D. in Pathology from the Medical College of Virginia. Dr. Presnell is a member of the American Society of Investigative Pathology, the American Society of Nephrology, and the International Society of Cell Transplantation, serves on the editorial board of the journal ‘3D Printing and Additive Manufacturing’, and remains active as an NIH reviewer as an industry representative in the biomedical engineering space.

Eric Michael David, MD, JD, Chief Strategy Officer and Executive Vice President of Pre-Clinical Development, joined us in May 2012 as Chief Strategy Officer and was also named Executive Vice President of Pre-Clinical Development in June 2015. From October 2005 to May 2012, Dr. David served in a number of positions at McKinsey & Company, most recently as Associate Principal, where he served private equity, pharmaceutical, biotech, diagnostic, and medical device clients to support pipeline and R&D strategy, as well as market entry strategy. Dr. David played a critical role in the commercial translation of 3D bioprinting as a founder and early director of Organovo, Inc. Prior to his time at McKinsey, Dr. David served as a freelance consultant to the Department of Health and Human Services in the use of genomic technologies for early detection of pathogens for public health preparedness. He completed his residency in Internal Medicine at New York Presbyterian Hospital, where he served as Assistant Chief Resident and received the Dick Bowman Award for scientific endeavor and dedication to patient care. He was also Assistant Professor at The Rogosin Institute and adjunct faculty at The Rockefeller University. He received his MD from Columbia University College of Physicians and Surgeons, his JD from Columbia University School of Law, and a BA in physics and fine arts from Amherst College. He is board certified in Internal Medicine and admitted to the Bar in New York State.

Jennifer Kinsbruner Bush, JD, General Counsel, Corporate Secretary and Compliance Officer, joined us in September 2014. Ms. Bush has more than 15 years of intellectual property, corporate legal, regulatory,

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compliance, and transactional experience. Prior to joining Organovo, from October 2010 to August 2014, Ms. Bush held positions of increasing responsibility at Broadcom Corp., where she was most recently Associate General Counsel. Before joining Broadcom, from February 2010 to October 2010, Ms. Bush served as Associate General Counsel of DivX, Inc. prior to its acquisition by Sonic Solutions in October 2010. Ms. Bush practiced for 10 years at nationally ranked law firms, serving as an associate and then as a principal with Fish & Richardson, P.C. from 2002 to 2010 and as an associate with Irell & Manella LLP from 2001 to 2002, where she represented clients focused on a variety of technologies, including in the areas of medical devices, life sciences, software, and consumer products. Prior to entering into private practice, Ms. Bush served as a law clerk to the Honorable Stanley Marcus, 11th Circuit Court of Appeals, from 2000 to 2001. Ms. Bush received a J.D. from Yale Law School and an A.B. in history and Latin American Studies from Princeton University.

Paul Gallant, General Manager, joined us in August 2015 as General Manager. Mr. Gallant has more than 20 years of management and research and development experience in the drug discovery industry, most recently serving as Chief Operating Officer for DiscoveRx, a global scientific product and services company, from November 2010 to August 2015. As Chief Operating Officer at DiscoveRx, Mr. Gallant was responsible for the company's largest business unit, drug discovery services. Mr. Gallant formerly served as senior director at Ambit Pharmaceuticals, acquired by DiscoveRx in 2010, from September 2005 to November 2010, where he led the development and commercialization for the KINOMEscan platform. The world's largest commercial kinase screening panel, KINOMEscan became a key element of DiscoveRx's offering post-acquisition. Mr. Gallant has also led research and development and service teams at Amgen, Millennium Pharmaceuticals, Cubist Pharmaceuticals and Massachusetts General Hospital. Mr. Gallant received a B.A. in biology from Colby College.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following tables set forth certain information regarding the beneficial ownership of our common stock as of June 20, 2016 (the record date) by (i) each person who, to our knowledge, beneficially owns more than 5% of our common stock; (ii) each of our directors, director nominee and named executive officers; and (iii) all of our executive officers, directors and director nominee as a group. Unless otherwise indicated in the table or the footnotes to the following table, each person named in the table has sole voting and investment power and such person's address is c/o Organovo Holdings, Inc., 6275 Nancy Ridge Dr., Suite 110, San Diego, California 92121.

We determined the number of shares of common stock beneficially owned by each person under rules promulgated by the SEC, based on information obtained from Company records and filings with the SEC. The information is not necessarily indicative of beneficial ownership for any other purpose. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power and also any shares which the individual or entity had the right to acquire within sixty days of June 20, 2016. These shares, however, are not deemed outstanding for the purpose of computing the percentage ownership of any other individual.

Applicable percentages are based on 92,391,989 shares of common stock outstanding as of June 20, 2016.

Beneficial Ownership(1)	Number of Common Shares	Percent of Common Shares
Name and address of Beneficial Owner		
5% Stockholders		
Keith Murphy	6,774,532(7)	7.3%
Blackrock, Inc.	4,986,768(14)	5.4%
Directors		
Robert Baltera, Jr.	286,506(2)	*%
James Glover	158,000(3)	*%
Tamar Howson	144,500(4)	*%
Richard Heyman, Ph.D.	148,500(5)	*%
Kirk Malloy	65,250(6)	*%
Named Executive Officers		
Keith Murphy	6,774,532(7)	7.3%
Sharon Presnell, Ph.D.	1,073,444(8)	1.1%
Eric David, MD, JD	1,475,056(9)	1.6%
Jennifer Kinsbruner Bush, JD	96,875(10)	*%
Barry Michaels	887,247(11)	*%
Michael Renard	935,000(12)	1.0%
All executive officers and directors as a group (11 persons)	12,044,910(13)	12.5%

* Less than one percent.

- (1) Beneficial ownership of shares and percentage ownership are determined in accordance with the rules of the SEC. Unless otherwise indicated and subject to community property laws where applicable, the individuals named in the table above have sole voting and investment power with respect to all shares of our common stock shown as beneficially owned by them.
- (2) Includes options to purchase 148,000 option shares currently exercisable or exercisable within 60 days of June 20, 2016.
- (3) Includes options to purchase 148,000 option shares currently exercisable or exercisable within 60 days of June 20, 2016.
- (4) Includes options to purchase 144,500 option shares currently exercisable or exercisable within 60 days of June 20, 2016.

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- (5) Includes options to purchase 148,500 option shares currently exercisable or exercisable within 60 days of June 20, 2016. Does not include 4,500 additional option shares of common stock subject to future vesting pursuant to the terms of stock option agreements.
- (6) Includes options to purchase 65,250 option shares currently exercisable or exercisable within 60 days of June 20, 2016. Does not include 28,250 additional option shares of common stock subject to future vesting pursuant to the terms of the stock option agreements.
- (7) 255,255 of these shares are held by Equity Trust Co., Custodian FBO Keith Murphy IRA. Includes warrants to purchase 30,000 shares of common stock at an exercise price of \$1.00 per share. Includes options to purchase 800,204 option shares currently exercisable or exercisable within 60 days of June 20, 2016. Does not include 616,250 additional option shares of common stock subject to future vesting pursuant to the terms of stock option agreements.
- (8) Includes options to purchase 1,004,380 option shares currently exercisable or exercisable within 60 days of June 20, 2016. Does not include 177,812 additional option shares of common stock subject to future vesting pursuant to the terms of stock option agreements.
- (9) Includes options to purchase 798,750 option shares currently exercisable or exercisable within 60 days of June 20, 2016. Does not include 171,250 additional option shares of common stock subject to future vesting pursuant to the terms of stock option agreements.
- (10) Includes options to purchase 96,875 option shares currently exercisable or exercisable within 60 days of June 20, 2016. Does not include 178,125 additional option shares of common stock subject to future vesting pursuant to the terms of stock option agreements.
- (11) Mr. Michaels retired from the Company effective April 1, 2016. Includes options to purchase 679,693 option shares currently exercisable or exercisable within 60 days of June 20, 2016. Does not include 335,000 additional option shares of common stock subject to future vesting pursuant to the terms of stock option agreements.
- (12) Mr. Renard resigned from the Company as a result of a permanent disability, effective October 3, 2015. Includes options to purchase 885,000 option shares currently exercisable.
- (13) Includes warrants to purchase 30,000 shares of common stock at an exercise price of \$1.00 per share. Includes options to purchase 4,919,152 option shares currently exercisable or exercisable within 60 days of June 20, 2016. Does not include 1,511,187 additional option shares of common stock subject to future vesting pursuant to the terms of stock option agreements.
- (14) Based solely upon a Schedule 13G filed on January 28, 2016, by Blackrock, Inc., 52 East 52nd Street, New York, NY 10055. According to the Schedule 13G, Blackrock, Inc. has sole voting and dispositive power with respect to 4,986,768 shares.

Changes in Control

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

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended (the "Act"), requires our executive officers and directors and persons who beneficially own more than 10% of our common stock to file initial reports of beneficial ownership and reports of changes in beneficial ownership with the SEC. These persons are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file. To the Company's knowledge, no person who, during fiscal year 2016, was a director or officer of the Company, or beneficial owner of more than 10% of the Company's common stock (which is the only class of securities of the Company registered under Section 12 of the Act), failed to file on a timely basis reports required by Section 16 of the Act. The foregoing is based solely upon a review by the Company of Forms 3 and 4 relating to the most recent fiscal year as furnished to the Company under Rule 16a-3(d) under the Act, and Forms 5 and amendments thereto furnished to the Company with respect to its most recent fiscal year, and any representation received by the Company from any reporting person that no Form 5 is required.

COMPENSATION DISCUSSION AND ANALYSIS

The following Compensation Discussion and Analysis is designed to provide stockholders with an understanding of our compensation philosophy and objectives as well as an overview of the analysis that our Compensation Committee performed in setting the compensation of our executive officers during Fiscal 2016 (i.e., the period from April 1, 2015 to March 31, 2016). This compensation discussion and analysis summarizes the Compensation Committee's determination of how and why, in addition to what, compensation actions were taken for our principal executive and financial officer and our three other most highly compensated executive officers serving as of the end of Fiscal 2016, including:

- Keith Murphy, our Chairman, Chief Executive Officer, President, Principal Financial Officer and Principal Accounting Officer;
- Sharon Presnell, Ph.D., our Chief Scientific Officer;
- Eric David, MD, JD, our Chief Strategy Officer and Executive Vice President of Pre-Clinical Development; and
- Jennifer Kinsbruner Bush, JD, our General Counsel, Corporate Secretary and Compliance Officer.

In addition, our compensation discussion and analysis summarizes the compensation received by two former executive officers of the Company for their service during Fiscal 2016:

- Barry Michaels, our Former Chief Financial Officer, who retired from the Company, effective April 1, 2016; and
- Michael Renard, our Former Executive Vice President of Commercial Operations, who resigned from the Company as a result of a permanent disability, effective October 3, 2015.

These six individuals are collectively referred to in this proxy statement as our "named executive officers".

Executive Summary

Our executive compensation program focuses on creating alignment between our stockholders and executive officers by including both performance and incentive-based compensation elements. Under our performance-based cash bonus plan, our executive officers are eligible for an annual cash bonus based on a percentage of their base salaries and conditioned upon their achievement of corporate and individual performance goals evaluated and approved by our Compensation Committee. In addition, under our long-term equity incentive plan, our executive officers receive stock options to purchase shares of our common stock with an exercise price equal to the fair market value of our common stock on the date of grant. The stock options vest over a four-year period. Because the stock options have a set exercise price, these awards do not have any value unless the Company's stock price increases over the four-year vesting period. The price of the Company's common stock as of the date of the Proxy Statement is currently lower than the exercise price of the stock option awards granted to our executive officers in Fiscal 2016. As a result, our executive officers have not realized any value from these awards to date, and the grant date fair value reported in the Summary Compensation Table below does not accurately reflect the compensation actually delivered to our executive officers from the Fiscal 2016 stock option awards.

Table 1 below illustrates that a significant percentage of the target total direct compensation ("TTDC") offered to our executive officers listed below for Fiscal 2016 consisted of performance and incentive based compensation. Although the Company did not specifically target a TTDC level in any formulaic manner, the TTDC level for each of the executive officers below (other than Ms. Bush), including the grant date fair value of the Fiscal 2016 stock option awards, benchmark below the median TTDC level for the executive officers in our peer group of comparison companies based on a study the Compensation Committee received from its independent compensation consultant in November 2015.

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Table 1 – TTDC for Fiscal 2016 – Named Executive Officers Continuing with the Company after Fiscal Year-End

Executive Officer	Salary (\$)	Target Performance- Based Cash Bonus (\$)	Incentive Based Option Awards \$(1)	TTDC (\$)	TTDC Subject to Performance Goals or Incentive Based (\$)	TTDC Subject to Performance Goals or Incentive Based (%)
Keith Murphy	\$500,000	\$ 250,000	\$ 1,529,378	\$2,279,378	\$ 1,779,378	78%
Sharon Presnell, Ph.D.	\$350,000	\$ 122,500	\$ 418,711	\$ 891,211	\$ 541,211	61%
Eric David, MD, JD	\$325,000	\$ 113,750	\$ 418,711	\$ 857,461	\$ 532,461	62%
Jennifer Kinsbruner Bush, JD	\$325,000	\$ 113,750	\$ 402,607	\$ 841,357	\$ 516,357	61%

(1) Represents the grant date fair value of the stock option awards, calculated in the same manner as reported in the Summary Compensation Table below.

In the tables that follow, we compare the TTDC offered to our chief executive officer, Keith Murphy, for the last three full fiscal years (Table 2) to the corresponding amounts that were paid out or that may be considered realized (based on our methodology described below) as of March 31, 2016 (Table 3).

Table 2 presents each component of our chief executive officer's TTDC for each of the last three full fiscal years. The Option Award amounts presented in Table 2 reflect the grant date fair value of each such award, calculated in the same manner as reported in the Summary Compensation Table below.

Table 2 – TTDC – Chief Executive Officer

Fiscal Year	Salary (\$)	Target Performance- Based Cash Bonus (\$)	Incentive Based Option Awards \$(1)	TTDC \$(1)
2016	\$ 500,000	\$ 250,000	\$1,529,378	\$2,279,378
2015	\$ 465,000	\$ 232,500	\$ 117,836	\$ 815,336
2014	\$ 365,000	\$ 135,050	\$4,190,665	\$4,690,715
3-Year Total	\$1,330,000	\$ 617,550	\$5,837,879	\$7,785,429

(1) The Compensation Committee has historically set the compensation for our executive officers at the beginning of each fiscal year. In March 2013, the Company changed its fiscal year end from December 31st to March 31st. As a result of this change in fiscal year, the Option Award issued to our chief executive officer for purposes of his Fiscal 2015 compensation actually occurred at the end of our newly defined Fiscal 2014 and is reported in Fiscal 2014 in the table above. The Stock Awards reported for Fiscal 2014 also include stock option awards automatically issued pursuant to the terms of an Equity Incentive Award Agreement the Company entered into with our chief executive officer in August 2012. Thereafter, the Compensation Committee adjusted the timing of setting the compensation of our executive officers to occur after the beginning of our newly defined fiscal year that commences each April 1st. As a result of this change, no annual compensation equity award is reported in Fiscal 2015 for our chief executive officer. The Option Awards reported in the table above for Fiscal 2015 represent stock options issued to our chief executive officer pursuant to the terms of the Equity Incentive Award Agreement. The Option Awards reported for Fiscal 2016 represent our chief executive officer's long-term equity award for Fiscal 2016.

Table 3 below reflects the realized total direct compensation ("RTDC") of our chief executive officer for the last three full fiscal years. The RTDC reflects: (i) the actual salary paid to our chief executive officer during the

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applicable periods, (ii) the actual performance based cash bonuses awarded to our chief executive officer by our Compensation Committee during the applicable periods, and (iii) the intrinsic value of the Options Awards granted to our chief executive officer. We determined the intrinsic value of each of the incentive based Option Awards was zero because the respective exercise prices of the Option Awards exceeded the closing price of our common stock on the NYSE MKT on March 31, 2016.

Our chief executive officer's RTDC for Fiscal 2016 was only 29% of his TTDC approved by the Compensation Committee because the value of his stock option award adjusted down due to stock price performance and his performance-based cash award was below his target award opportunity because the Company did not satisfy the corporate performance goals established by the Compensation Committee. Further, our chief executive officer's performance-based cash bonus award in Fiscal 2016 was 30% lower than the award he received in Fiscal 2015, his cash compensation (salary plus actual performance-based cash award) was 6% lower than his cash compensation in Fiscal 2015, and his TTDC and Summary Compensation Table reported Total Direct Compensation (TDC) were both below the median of the compensation offered to the chief executive officers in our compensation peer group.

Table 3 – RTDC as a Percentage of TTDC – Chief Executive Officer

Fiscal Year	Actual Salary (\$)	Actual Performance-Based Cash Bonus (\$)	Intrinsic Value of Incentive Based Option Awards at 3/31/2016 (\$)	RTDC at 3/31/2016 (\$)	RTDC at 3/31/2016 as a Percentage of TTDC (%)
2016	\$ 499,058	\$ 172,000	—	\$ 671,058	29%
2015	\$ 469,897	\$ 246,696	—	\$ 716,593	88%
2014	\$ 362,877	\$ 128,052	—	\$ 490,929	10%
3-Year Total	<u>\$1,331,832</u>	<u>\$ 546,748</u>	<u>—</u>	<u>\$1,875,580</u>	
Comparison to Table 2 Amount (%)	100%	81%	0%	24%	

Overview of Executive Compensation Program

Our Compensation Committee reviews and approves all compensation decisions relating to our executive officers, including our named executive officers, and oversees and administers our executive compensation program. Our compensation program is designed to attract, retain and incentivize talented executives, to motivate them to achieve our key financial, operational and strategic goals, and to reward them for superior performance. Our compensation program is also intended to align our executive officers' interests with those of our stockholders by rewarding their achievement of the specific corporate and individual goals approved and evaluated by our Compensation Committee. Our compensation approach is tied to our early commercial stage, with the corporate performance goals focused on achieving our commercialization and revenue targets, securing significant collaborative arrangements, advancing our product and technology platform, developing a sustainable operating plan and increasing long-term stockholder value.

In February 2014, our Compensation Committee engaged Frederic W. Cook & Co., Inc. ("F.W. Cook"), an independent, national compensation consulting firm, to evaluate our executive compensation framework and to assist the Compensation Committee in determining the market level of compensation to offer to our executive officers for Fiscal 2015. The Compensation Committee re-engaged F.W. Cook to update the peer compensation data in the second half of calendar 2015. F.W. Cook's evaluations were based on a peer group of public biotechnology companies comparable to the Company and approved by our Compensation Committee. F.W. Cook's report concluded that the framework the Compensation Committee had established for our executive

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compensation program, consisting of a base salary, performance-based cash incentives and long-term equity-based incentives, was appropriate and properly structured to incentivize and compensate our executive officers and aligned their interests with those of our stockholders.

Our Compensation Committee retained this executive compensation framework for Fiscal 2016. In setting the compensation of our executive officers in Fiscal 2016, the Compensation Committee evaluated updated compensation data from the same peer group of companies it had selected in Fiscal 2015, and had a new study for reference at the end of the fiscal year following the updated November 2015 F.W. Cook compensation study. The Compensation Committee also considered publicly available market and survey compensation data. Further, in setting compensation for Fiscal 2016, our Compensation Committee considered the strong support our stockholders demonstrated for our executive compensation program by casting approximately 95% of their votes in favor of our “say-on-pay” proposal related to our Fiscal 2015 executive compensation.

For Fiscal 2016, the objectives of our compensation program included:

- a program structure designed to attract and retain the most highly qualified executive officers;
- a comparative peer group for different compensation elements;
- alignment of executive compensation, individually and as a team, to the long-term interests of our stockholders;
- program flexibility to permit the accommodation of appropriate individual circumstances;
- clear, aligned and objectively measurable corporate and individual performance goals; and
- consideration of the voting results from the prior year’s advisory vote on the compensation of our named executive officers.

Our Compensation Committee intends to continue to evaluate our executive compensation program, and each of the compensation elements of our executive compensation program, on an annual basis. As we continue to focus on our commercialization and revenue objectives and the advancement of our product and technology platform, we expect that the specific direction, emphasis, and compensation elements of our executive compensation program will continue to evolve.

Compensation Process

Our Compensation Committee is responsible for setting the compensation levels for our executive officers on an annual basis. To assist the Compensation Committee, our Chief Executive Officer prepares a report recommending the base salaries, performance-based cash incentive targets, and long-term equity incentives for each executive officer (other than for himself). Our Chief Executive Officer also proposes the target and stretch corporate and individual performance goals for our performance-based cash incentive plan. The Compensation Committee in its sole discretion may accept or adjust the compensation and the corporate and performance goals recommended by our Chief Executive Officer. In making this determination, our Compensation Committee considers benchmark data from a peer group of public biotech companies it selects, relevant market and survey data provided by its independent compensation consultant. No executive officer is allowed to be present at the time his or her compensation is being approved by the Compensation Committee.

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Benchmarking

For Fiscal 2015, our Compensation Committee, with input from F. W. Cook, established a peer group of fifteen (15) biotechnology companies for purposes of benchmarking the compensation offered to our executive officers. The Compensation Committee selected companies for the peer group that it determined were comparable to the Company based on their size, industry, revenues, commercialization and product development status and market valuation. In setting the compensation of our executive officers for Fiscal 2016, the Compensation Committee determined it was appropriate to use the same peer group of companies it had selected in Fiscal 2015, except that the Compensation Committee removed one company that it no longer deemed comparable based on its adverse performance. The peer group for Fiscal 2016 included:

AcelRx Pharmaceuticals, Inc.	Anacor Pharmaceuticals Inc.	Arrowhead Research
CytRx Corporation	Inovio Pharmaceuticals, Inc.	Insmed Incorporated
InVivo Therapeutics Corp.	Keryx Biopharmaceuticals, Inc.	Neostem, Inc.
Neuralstem, Inc.	Novavax, Inc.	Peregrine Pharmaceuticals, Inc.
Regulus Therapeutics Inc.	Sangamo BioSciences, Inc.	

The Compensation Committee re-evaluated its compensation peer group again in September 2015, and decided to remove Anacor Pharmaceuticals, Inc. and Novavax, Inc. because it determined that the market valuations for these companies had grown too high for direct comparison to the Company. The Compensation Committee, with input from F.W. Cook, replaced these companies with four commercial stage peer companies with market valuations less than four times the Company's market valuation at the time the decision was made (including, Luminex Corporation, Sequenom, Inc., Retrophin, Inc. and Immunomedics, Inc.). The Compensation Committee had compensation data from this revised peer group when it determined the cash bonus payouts for Fiscal 2016.

Determination of Executive Compensation

The Compensation Committee did not target compensation to a particular percentile for our executive officers in Fiscal 2016, although the data F.W. Cook provided for the revised peer group showed that Total Direct Compensation, consisting of the sum of salary, performance-based cash bonus, and the grant date fair value of the stock option awards, for all of the ongoing named executive officers was below the median (other than Ms. Bush). Although it did not target a particular percentile in Fiscal 2016, the Compensation Committee considered benchmark data from the peer group it established, relevant publicly available market data and surveys and the compensation reports F.W. Cook provided to the Compensation Committee. In addition, the Compensation Committee considered the compensation recommendations of our Chief Executive Officer (other than with respect to determining his own compensation), as well as the Company's overall performance during the prior fiscal year, the Company's financial status and operating runway, each executive officer's responsibilities and contribution to the achievement of the prior year's corporate goals, and each executive officer's individual performance during the prior fiscal year. With respect to new hires, our Compensation Committee considered an executive officer's background and historical compensation in lieu of prior year performance in addition to benchmark data for the new hire's position.

Additionally, in establishing Fiscal 2016 compensation, the Compensation Committee considered the results of the most recent stockholder advisory vote on our executive compensation (the say-on-pay proposal) at our 2015 Annual Meeting of Stockholders, at which approximately 95% of the votes cast on the say-on-pay proposal were voted in favor of the proposal. The Compensation Committee believes these results affirm stockholder support for our executive compensation program and objectives. The Compensation Committee will continue to consider the results of future say-on-pay proposals when making executive compensation decisions.

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Commitment to Good Compensation Governance Practices

In designing our executive compensation program, our Compensation Committee intends to create alignment between our stockholders and executive officers and to implement good compensation governance by:

- ***Annual Advisory Vote on the Compensation of our Named Executive Officers*** – We provide our stockholders with the ability to vote annually on the compensation of our named executive officers.
- ***Independent Compensation Consultant*** – The Compensation Committee engaged F.W. Cook during 2014 and 2016 to provide compensation consulting services. F.W. Cook did not provide any other services to the Company during the periods they served as a consultant to the Compensation Committee.
- ***Stock Ownership Guidelines*** – We have established stock ownership guidelines to further align our executive officers' interests with those of our stockholders. The guidelines require our named executive officers to acquire and hold a meaningful ownership interest in our Company.
- ***Compensation Risk Assessment*** – The Compensation Committee oversees and evaluates an annual risk assessment of the Company's compensation program.
- ***Prohibitions on Hedging, Pledging and Margin Activities*** – Our insider trading policy prohibits hedging transactions by Company employees. Under the policy, all short-term, speculative or hedging transactions in Organovo securities are prohibited by all employees. In addition, the policy specifically prohibits the use of Organovo securities for pledging and margin activities.

The Compensation Committee believes that the program and policies described above demonstrate the Company's commitment to, and consistent execution of, an effective performance-oriented executive compensation program.

Components of Executive Compensation

The framework established by the Compensation Committee, based on the data provided by F.W. Cook, for our executive compensation program consists of a base salary, performance-based cash incentives and long-term equity-based incentives. The Compensation Committee endeavors to combine these compensation elements to develop a compensation package that provides competitive pay, rewards our executive officers for achieving our commercial, operational and strategic objectives and aligns the interests of our executive officers with those of our stockholders.

Base Salary. The Compensation Committee has provided, and will continue to provide, our executive officers with a base salary to compensate them for services provided during the fiscal year. In addition to benchmark data from our peer group, our Compensation Committee considers the Company's overall performance during the prior fiscal year, cash burn, the Company's financial status and operating profile, each executive officer's responsibilities and contribution to the achievement of the prior year's corporate goals, and each executive officer's individual performance during the prior fiscal year. The evaluations and recommendations proposed by our Chief Executive Officer are also considered (other than with respect to determining his own compensation). With respect to new hires, the Compensation Committee considers an executive's background and historical compensation in lieu of prior year performance as well as benchmark data for the new hire's position. Our Compensation Committee evaluates and sets the base salaries for our executives following annual performance evaluations, as well as upon a promotion or other change in responsibility. Our Compensation Committee expects to continue to utilize these policies going forward.

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Following the assessment of benchmark data from our peer group and the review of compensation data and surveys, the Compensation Committee set base salaries for Fiscal 2016 to generally be in the range of the 50th percentile of market for our peer group. However, the November 2016 study provided to the Compensation Committee by F.W. Cook for the revised peer group showed that all of the named executive officers had a salary that was below the median.

The base salaries of our named executive officers for Fiscal 2016 are set forth in the following table:

Name and Title	Fiscal 2016 Base Salary
Keith Murphy, <i>Chief Executive Officer, President, Principal Financial Officer and Principal Accounting Officer</i>	\$ 500,000
Sharon Presnell, Ph.D., <i>Chief Scientific Officer</i>	\$ 350,000
Eric David, MD, JD, <i>Chief Strategy Officer and Executive Vice President of Pre-Clinical Development</i>	\$ 325,000
Jennifer Kinsbruner Bush, JD, <i>General Counsel, Corporate Secretary and Compliance Officer</i>	\$ 325,000
Bary Michaels, <i>Former Chief Financial Officer(1)</i>	\$ 345,000
Michael Renard, <i>Former Executive Vice President of Commercial Operations(2)</i>	\$ 325,000

- (1) Mr. Michaels retired from the Company, effective April 1, 2016.
- (2) Mr. Renard resigned from the Company as a result of a permanent disability, effective October 3, 2015.

Performance-Based Cash Incentive Awards. Our executive compensation program includes an annual performance-based cash incentive award, which provides our executive officers with an annual cash incentive opportunity as a percentage of their base salaries based upon their achievement of corporate and individual performance goals evaluated and approved by the Compensation Committee. For Fiscal 2016, the Compensation Committee determined that the annual target bonus opportunity expressed as a percentage of base salary for Mr. Murphy should be 50% of his base salary and the annual target bonus opportunities for each of the other named executive officers should be 35% of their respective base salaries. Each executive officer is eligible to receive up to 150% of his or her target bonus amount based on the achievement of “stretch” corporate and individual performance goals evaluated and approved by the Compensation Committee. If the minimum base performance level is met for a corporate or individual performance goal, the Compensation Committee has the discretion to assign zero percentage to that performance goal or a bonus percentage on an interpolated basis between zero and 100%. For performance between the target and stretch levels for an individual or corporate performance goal, the bonus percentage for that performance goal is determined on an interpolated basis. The Compensation Committee determined that 66 ²/₃% of each executive officer’s annual performance-based cash incentive award should be based on corporate performance goals that apply equally to all executive officers and 33 ¹/₃% would be based on the executive officer’s individual performance goals.

For Fiscal 2016, our Compensation Committee established six corporate target and stretch performance goals, each with equal weighting, including: (i) service contract bookings for its liver tissue business, (ii) total revenue recognized during Fiscal 2016, (iii) business development goals related to securing collaborative arrangements, (iv) achieving development milestones for the Company’s therapeutic tissue candidates, (v) developing a sustainable operating plan, and (vi) building long-term shareholder value. For Fiscal 2016, the Compensation Committee evaluated the Company’s performance relative to each of these corporate performance goals. For performance goals with minimum base performance levels, the Compensation Committee assigned a zero percentage to those performance goals if the Company did not meet the minimum base performance level. For performance goals that did not have a minimum base performance level or for which the Company exceeded the minimum performance level, the Compensation Committee determined the bonus percentage on an interpolated basis between zero and 100%.

Based on its evaluation, the Compensation Committee determined that the Company achieved an overall aggregate of 51.3% of the corporate performance goals described above. Our Compensation Committee expected

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that the objectives it set as the corporate performance goals at the target level of performance would be challenging and require effective execution by the Company's management team and that the objectives it set for the stretch level of performance would be difficult to achieve.

The Compensation Committee then considered the respective performance of each of the executive officers in achieving their individual target and stretch performance goals. Mr. Murphy's individual performance goals included: (i) continuing to build the Company's leadership team, (ii) building and sustaining the Company's culture and employee engagement, (iii) maintaining a strong financial profile for the Company and (iv) increasing long-term stockholder value, for which the Compensation Committee determined Mr. Murphy achieved an aggregate of 103.8% of his individual performance goals.

Dr. Presnell's individual performance goals included: (i) supporting the Company's commercial efforts, contracts and collaborative arrangements, (ii) achieving operational excellence in the Company's R&D function, (iii) delivering next-generation technical solutions, (iv) enhancing the Company's scientific presence and recognition, (v) overseeing the Samsara business and product offerings and (vi) securing research grants and government funding, for which the Compensation Committee determined Dr. Presnell achieved an aggregate of 110.0% of her individual performance goals.

Dr. David's individual performance goals included: (i) increasing revenue by diversifying service and product offerings, (ii) advancing the Company's therapeutic tissue program, (iii) establishing long-term stockholder value, (iv) building and sustaining the Company's culture and employee engagement, (v) driving additional business with existing partners, (vi) broadening the Company's therapeutic tissue portfolio, (vii) increasing use of non-dilutive funding for therapeutic tissue development, and (viii) assessing regulatory requirements for the Company's preclinical candidates, for which the Compensation Committee determined Dr. David achieved an aggregate of 87.5% of his individual performance goals.

Ms. Bush's individual performance goals included: (i) legal support for strategic commercial, research and development and business development initiatives, (ii) compliance assessment and improvement, (iii) intellectual property strategy and training and (iv) improving corporate secretary functions, for which the Compensation Committee determined Ms. Bush achieved an aggregate of 131.0% of her individual performance goals.

Mr. Michaels' individual performance goals included: (i) capital raising, (ii) financial sustainability and (iii) space planning, for which the Compensation Committee determined Mr. Michaels achieved an aggregate of 94.1% of his individual performance goals.

Mr. Renard, who retired from the Company in October 2015 as a result of a permanent disability, received a pro-rated bonus at 100% of target.

Our Compensation Committee expected that the objectives it approved for each executive officer's individual performance goals at the target level of performance could be achieved and that the objectives it approved for the stretch level of performance would be difficult to achieve.

Based on the achievement of the corporate and respective individual performance goals, our Compensation Committee awarded our executive officers cash bonuses ranging between 17.5% and 34.5% of their respective base salaries. These bonus amounts were less than the target bonus award opportunities established by the Compensation Committee for our executive officers because the Company did not achieve all of the corporate performance goals established by the Compensation Committee, which the Compensation Committee views as alignment of pay with performance. The bonus amounts earned by the three ongoing executives who were employed for all of Fiscal 2015 and Fiscal 2016 (i.e., Mr. Murphy and Drs. Presnell and David) were 25% to 38% lower in Fiscal 2016 than the bonus amounts they earned in Fiscal 2015. This resulted in actual cash compensation that was 3% to 8% lower in Fiscal 2016, even after considering salary increases provided at the start of Fiscal 2016 following

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Fiscal 2015 performance. Our chief executive officer's bonus fell 30% and his cash compensation was 6% lower in Fiscal 2016 compared to Fiscal 2015.

Specifically, the bonus payments for Fiscal 2016 were as follows:

Name and Title	Percentage of Base Salary	Fiscal 2016 Bonus Award
Keith Murphy, <i>Chief Executive Officer, President, Principal Financial Officer and Principal Accounting Officer</i>	34.5%	\$ 172,000
Sharon Presnell, Ph.D., <i>Chief Scientific Officer</i>	24.8%	\$ 86,812
Eric David, MD, JD, <i>Chief Strategy Officer and Executive Vice President of Pre-Clinical Development</i>	22.2%	\$ 72,080
Jennifer Kinsbruner Bush, JD, <i>General Counsel, Corporate Secretary and Compliance Officer</i>	27.4%	\$ 88,573
Barry Michaels, <i>Former Chief Financial Officer</i>	23.0%	\$ 79,172
Michael Renard, <i>Former Executive Vice President of Commercial Operations</i>	17.5%	\$ 56,875

Equity-Based Incentive Awards. In addition to base salaries and annual performance-based cash incentives, the Compensation Committee provides long-term, equity-based incentive awards to our executive officers, generally consisting of stock options to purchase shares of our common stock. The stock options typically vest over a four-year period and have an exercise price set at the fair market value of the Company's common stock on the date of grant. The Compensation Committee believes that stock option awards help further the Company's compensation objectives by encouraging executives to remain with the Company through at least the vesting period for these awards. Stock option awards also provide the executive officer with an incentive to continue to focus on the Company's long-term financial performance and increasing stockholder value as the awards don't have any value unless the Company's stock price increases over the vesting period from the grant date value. The Compensation Committee has and plans to continue to grant long-term equity incentive awards to the Company's executive officers in connection with their initial hire, following promotions and on an annual basis.

In June 2015, the Compensation Committee granted each of the named executive officers stock options for Fiscal 2016. In determining the size and terms of the stock option grants, the Compensation Committee considered benchmark data from our peer group, publicly available market and survey data and the individual performance of the named executive officers during Fiscal 2015. The Compensation Committee also considered the equity award levels recommended by the Company's chief executive officer, Mr. Murphy, for the named executive officers (other than himself). Based on this analysis, the Compensation Committee approved the grant of a stock option for 465,000 shares to Mr. Murphy, a stock option for 255,000 shares to Mr. Michaels, a stock option for 130,000 shares to each of Drs. Presnell and David and Mr. Renard and a stock option for 125,000 shares to Ms. Bush. Each of the stock options has an exercise price of \$4.92 per share, the closing price of our common stock on the date of grant. The stock options vest over a four (4) year period, with 25% of the option shares vesting on June 4, 2016, and the remaining option shares vesting quarterly over the following three years. The stock option awards granted in Fiscal 2016 are currently underwater based on the market price of the Company's common stock as of the date of this Proxy Statement. As a result, these stock options awards currently do not provide any value to our executive officers because of the decline in the market price of the Company's common stock after the grant date. This is considered to be a natural pay-for-performance outcome by the Compensation Committee, and these stock option awards have not been repriced or exchanged.

Other Benefits

In order to attract and retain qualified individuals and pay market levels of compensation, we have historically provided, and will continue to provide, our executives with the following benefits:

- **Health Insurance** – We provide each of our executives and their spouses and children the same health, dental, and vision insurance coverage we make available to our other eligible employees.

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- **Life and Disability Insurance** – We provide each of our executives with the same life and disability insurance as we make available to our other eligible employees.
- **Pension Benefits** – We do not provide pension arrangements or post-retirement health coverage for our executives or employees. We implemented a 401(k) Plan effective January 1, 2014, which does not provide for matching contributions by the Company.
- **Nonqualified Deferred Compensation** – We do not provide any nonqualified defined contribution or other deferred compensation plans to any of our employees.
- **Perquisites** – We limit the perquisites that we make available to our executive officers. In certain cases, we have reimbursed our executive officers for their relocation expenses on their initial hire.

Stock, Option and RSU Grant Practices

All long-term equity incentives awarded to our executives, employees, consultants and directors have been granted at no less than the fair market value on the date of the award or grant. The amount of realizable value related to such grants and awards is determined by our stock price on the date the option is exercised following vesting and, therefore, will be determined by our financial performance in the time after the award is granted. As a result, short term movements in our stock price shortly after the award date is largely irrelevant for purposes of the long-term equity incentives.

The exercise price of any option grant and the grant date value of any restricted stock unit (“RSU”) award are determined by reference to the fair market value of the underlying shares, which our 2012 Equity Incentive Plan (the “Plan”) defines as the closing price of our common stock on the date of grant. However, because options have been, and will continue to be, granted at fair market value, the holder of an option can realize value only to the extent that the stock price of our common stock increases during the term of the option. RSUs generally have cash value equal to the current stock price.

Under the Plan, stock option grants generally vest over four years, with 25% of the option shares vesting on the one-year anniversary of the vesting commencement date and the remaining option shares vesting on a quarterly basis over the next 12 quarters (for a total vesting period of 48 months from the date of grant). All vesting is subject to continued service to the Company. All options have a 10-year term. Additional information regarding accelerated vesting following a change in control is discussed below under “Potential Payments upon Termination or Change in Control.”

Severance Plan Participation Agreements

On November 4, 2015 (the “Effective Date”), we entered into a Severance and Change in Control Plan Participation Agreement (the “Participation Agreement”) with each of our executive officers and certain key employees pursuant to our Severance and Change in Control Plan (the “Severance Plan”) approved by our Compensation Committee. The Severance Plan establishes the amount of severance payments and benefits available in the event of a (i) termination of employment by the Company for reasons other than Cause, death or Disability or by the participant for Good Reason and (ii) termination of employment by the Company for reasons other than Cause, death or Disability or by the participant for Good Reason within six months before or within 12 months after a Change in Control (as defined in the Severance Plan).

The Severance Plan establishes four tiers of employees: Tier 1, Tier 2, Tier 3 and Tier 4. The Company’s Tier 1 employees include the Company’s chief executive officer. The Company’s Tier 2 employees include all non-Tier 1 members of the Company’s executive team, including Dr. Presnell, Dr. David and Ms. Bush. The Company’s Tier 3 employees include all Senior Vice Presidents who are not members of the Company’s executive team. The Company’s Tier 4 employees include all Vice Presidents who are not members of the Company’s executive team.

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Upon termination of employment by the Company for reasons other than Cause, death or Disability or by the participant for Good Reason, each (i) Tier 1 employee is eligible for a cash severance payment equal to 2.0 times the employee's base salary, paid in a lump sum, plus a pro-rated target bonus for the fiscal year in which the termination occurs, Health Benefit Continuation (as defined in the Severance Plan) for up to 18 months, and Outplacement Assistance (as defined in the Severance Plan) for 18 months; (ii) Tier 2 employee is eligible for a cash severance payment equal to 1.0 times the employee's base salary, paid in a lump sum, plus a pro-rated target bonus for the fiscal year in which the termination occurs, Health Benefit Continuation for up to 12 months, and Outplacement Assistance for 12 months.

Upon termination of employment by the Company for reasons other than Cause, death or Disability or by the participant for Good Reason within 6 months before or within 24 months after a Change in Control (as defined in the Severance Plan), each (i) Tier 1 employee is eligible for a cash severance payment equal to 2.0 times the employee's base salary, paid in a lump sum, plus a pro-rated target bonus for the fiscal year in which the termination occurs, Health Benefit Continuation (as defined in the Severance Plan) for up to 18 months, and Outplacement Assistance (as defined in the Severance Plan) for 18 months; (ii) Tier 2 employee is eligible for a cash severance payment equal to 1.0 times the employee's base salary, paid in a lump sum, plus a pro-rated target bonus for the fiscal year in which the termination occurs, Health Benefit Continuation for up to 12 months, and Outplacement Assistance for 12 months. In addition, each Tier 1-4 employee will receive full accelerated vesting of all outstanding equity grants and a one-year time period to exercise any stock options or stock appreciation rights which are not cashed out upon the Change in Control.

Payment of awards under the Severance Plan is conditioned upon the employee signing a general release of claims in favor of the Company and agreeing to abide by restrictive covenants including maintaining confidential information of the Company, non-solicitation and non-recruitment of Company employees for the Restricted Period (as defined below), non-solicitation of the Company's customers or potential customers during the Restricted Period, non-employment by and limitations on investment in competitors of the Company for the Restricted Period, and no disparagement of the Company. The Restricted Period is twenty-four months for Tier 1 employees and twelve months for Tier 2 employees.

Further, pursuant to the terms of the Severance Plan Participation Agreements, any existing employment or severance agreement between the Company and the participant was immediately terminated and replaced with the provisions of the Severance Plan, subject to limited exceptions required to comply with the requirements of Internal Revenue Code Section 409A.

"Cause" as defined in the Severance Plan means (i) the willful and continued failure of the Participant to perform substantially the Participant's duties with Organovo (other than any such failure resulting from incapacity due to physical or mental illness), as determined by the Board with respect to any Tier 1 or Tier 2 Employee, and as determined by Organovo's Chief Executive Officer with respect to Employees in Tiers 3-4 no earlier than thirty (30) days after a written demand for substantial performance is delivered to the Participant, which specifically identifies the manner in which Organovo believes that the Participant has willfully and continuously failed to perform substantially the Participant's duties with Organovo (provided, however, that with respect to any Tier 1 or Tier 2 Employee, the failure to achieve individual or Company-based performance goals, budgets or targets shall not be deemed to be a failure of the Participant to perform his or her duties for purposes of this definition of Cause); (ii) the willful engaging by the Participant in illegal conduct or gross misconduct which is materially and demonstrably injurious to Organovo or Participant's ability to perform his or her duties with Organovo; (iii) conviction (including a plea of guilty or *nolo contendere*) of a felony; (iv) a material violation of a material written policy of Organovo or any Affiliate, violation of which would be grounds for immediate dismissal under applicable Company policy; (v) failure to comply in any material respect with the Foreign Corrupt Practices Act, the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Truth in Negotiations Act, or any rules or regulations thereunder; (vi) a material breach of the restrictive covenants in Section 7(b) subject to the cure provisions provided in Section 7(b) of the Plan.

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“Disability” means incapacity due to physical or mental illness which has rendered the Participant unable effectively to carry out his/her duties and obligations to Organovo or unable to participate effectively and actively in the management of Organovo for a period of ninety (90) consecutive days or for shorter periods aggregating to one-hundred twenty (120) days (whether or not consecutive) during any consecutive twelve (12) months.

“Good Reason” as defined in the Severance Plan means, means, without the Participant’s consent: (i) in the case of a Tier 1, 2, 3, or 4 Employee, a material diminution in the Participant’s Base Salary or Target Bonus Potential. This does not apply to a material diminution in the case of a Tier 1 or Tier 2 Employee resulting from a determination by both the CEO and the Compensation Committee that Organovo’s financial condition is such that a reduction in compensation is appropriate and the reduction is applied uniformly to all Company officers; (ii) a material diminution in the Participant’s authority, duties, or responsibilities, which shall include (A) with respect to any Participant who is a member of the Board, any failure of the Board to appoint or the stockholders of Organovo to elect such Participant as a member of the Board, or any removal of Participant from the Board for reasons other than Cause, (B) with respect to any Participant who is a Tier 1 or Tier 2 Employee, removal from Organovo’s Executive Team; (iii) with respect to any Participant who is a Tier 1, 2, 3, or 4 Employee, a material diminution in the authority, duties, or responsibilities of the supervisor to whom the Participant is required to report; (iv) any requirement that the Participant relocate, by more than fifty (50) miles, the principal location from which the Participant performs services for Organovo immediately prior to the termination of employment or the occurrence of the Change in Control. It shall be a condition precedent to the Participant’s right to terminate Participant’s employment for Good Reason (whether before or after a Change in Control) that (i) the Participant shall have first given Organovo written notice stating with reasonable specificity the breach on which such termination is premised within ninety (90) days after the Participant becomes aware or should have become aware of such breach, and (ii) if such breach is susceptible of cure or remedy, such breach has not been cured or remedied within thirty (30) days after receipt of such notice.

Death or Disability Benefits. The outstanding equity awards held by our executive officers provide such executive officers with accelerated vesting if the executive officer terminates services with the Company as a result of death or disability. In order for an equity award to be eligible for accelerated vesting, the executive officer’s death or disability must occur more than 90 days after the date the equity award was granted. With respect to performance based equity awards, an executive officer will vest at target levels upon the executive officer’s death or disability.

Separation Agreements with Former Executive Officers

Barry Michaels, the Company’s former chief financial officer, retired as the Company’s chief financial officer, effective April 1, 2016 (the “Retirement Date”). Prior to his retirement, the Company had entered into a Severance and Change in Control Plan Participation Agreement with Mr. Michaels in which he was classified as a Tier 1 employee. In connection with his retirement, Mr. Michaels and the Company entered into a Consulting, Separation Agreement and Release (the “Separation Agreement”), dated March 30, 2016, which superseded Mr. Michaels’ Severance and Change in Control Plan Participation Agreement. Under the consulting agreement, Mr. Michaels is assisting the Company while it continues the process of identifying and retaining a new chief financial officer. In the Separation Agreement, Mr. Michaels agreed to a general release of claims and other restrictions and covenants in favor of the Company, including non-compete and non-solicitation provisions. In exchange for signing the Separation Agreement, Mr. Michaels received a lump sum severance payment in the amount of \$247,701, representing six months of his base salary, accrued paid time off, and 24 months of continued health benefits following the Retirement Date. Because he served as chief financial officer through the end of Fiscal 2016, Mr. Michaels also received a cash bonus for his services to the Company during Fiscal 2016. Based on his performance during Fiscal 2016, the Compensation Committee set his bonus at 23.0% of his base salary based on the Company’s achievement of the corporate performance goals and his achievement of his individual performance goals, as discussed in “*Performance-Based Cash Incentive Awards*” above. This bonus was paid to Mr. Michaels at the same time the Company’s other executive officers received their bonus payments for Fiscal 2016. Mr. Michaels also entered into a Consulting Agreement (the “Consulting Agreement”) with the

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Company, pursuant to which Mr. Michaels will receive a quarterly retainer of \$74,000 for his services under the Consulting Agreement through December 31, 2017.

Michael Renard, the Company's former Executive Vice President of Commercial Operations, resigned from the Company as a result of a permanent disability, effective October 3, 2015 (the "Separation Date"). In connection with his resignation, Mr. Renard and the Company entered into a Separation Agreement and Release (the "Agreement and Release"), dated October 3, 2015. In the Agreement and Release, Mr. Renard agreed to a general release of claims and other restrictions and covenants in favor of the Company, including non-compete and non-solicitation provisions. In exchange for signing the Separation Agreement, Mr. Renard received a lump sum severance payment in the amount of \$325,000, representing twelve months of his base salary, a prorated bonus of \$56,875, and 12 months of continued health benefits following the Separation Date. In addition, Mr. Renard's outstanding stock option awards were modified such that the options may be exercised within 24 months of the Separation Date.

REPORT OF THE COMPENSATION COMMITTEE

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and included in this Proxy Statement. Based on these reviews and discussions, the Compensation Committee has recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this Proxy Statement.

The Compensation Committee of the Board of Directors:

Tamar Howson, Chair
James Glover
Richard Heyman, Ph.D.
Kirk Malloy, Ph.D.

EXECUTIVE COMPENSATION

The following tables contain compensation information for our named executive officers during the fiscal year ended March 31, 2016 (“Fiscal 2016”), the fiscal year ended March 31, 2015 (“Fiscal 2015”), and the fiscal year ended March 31, 2014 (“Fiscal 2014”). The information included in these tables should be read in conjunction with the Compensation Discussion and Analysis disclosed above.

Summary Compensation Table

The following table summarizes the total compensation paid to or earned by each named executive officer for Fiscal 2016, Fiscal 2015 and Fiscal 2014.

Name and Principal Position	Year or Period	Salary (\$)	Bonus (\$)(3)	Option Awards (4) (\$)	Stock Awards (\$)	Non-Equity Incentive Plan Compensation (\$)	All Other Compensation (5) (\$)	Total (\$)
Keith Murphy	2016	499,058	—	1,529,378	—	172,000	—	2,200,436
Chairman, Chief Executive Officer, President, Principal Financial Officer and Principal Accounting Officer	2015	469,897	—	117,836	—	246,696	—	834,429
	2014	362,877	—	4,190,665	—	128,052	—	4,681,594
Sharon Presnell, Ph.D.	2016	349,462	—	418,711	—	86,812	—	854,985
Chief Scientific Officer	2015	334,715	—	—	—	115,587	—	450,302
	2014	289,052	—	1,019,962	—	90,686	—	1,399,700
Eric David, MD, JD	2016	324,597	—	418,711	—	72,080	—	815,388
Chief Strategy Officer and Executive Vice President of Pre-Clinical Development	2015	315,092	—	—	—	115,427	—	430,519
	2014	289,805	—	921,256	—	81,609	—	1,292,670
Jennifer Kinsbruner Bush, JD	2016	323,115	20,000	402,607	—	88,573	—	834,295
General Counsel, Corporate Secretary and Compliance Officer	2015	141,231	20,000	689,687	—	44,488	—	895,406
Barry Michaels	2016	344,731	—	973,733	—	79,172	—	1,397,636
Former Chief Financial Officer(1)	2015	339,600	—	544,357	—	125,200	—	1,009,157
	2014	289,052	—	2,363,944	—	102,926	—	2,755,922
Michael Renard	2016	180,118	—	418,711	—	56,875	325,000	980,704
Former Executive Vice President of Commercial Operations(2)	2015	312,864	—	—	—	114,796	—	427,660
	2014	268,451	—	1,019,962	—	91,478	—	1,379,891

(1) Mr. Michaels retired from the Company, effective April 1, 2016.

(2) Mr. Renard resigned from the Company, as a result of a permanent disability, effective October 3, 2015. Includes 50% of his target bonus for the fiscal year ended March 31, 2016.

(3) Includes a \$40,000 sign-on bonus to Ms. Bush following her joining the Company in 2014, with \$20,000 payable in fiscal 2015 and \$20,000 payable in fiscal 2016.

(4) These amounts represent the grant date fair value of equity-based awards granted by the Company during the periods presented, determined in accordance with FASB ASC Topic 718. All awards are amortized over the vesting life of the award. For the assumptions used in our valuations, see “Note 7 – Stockholders’ Equity” of our notes to consolidated financial statements in the annual report on Form 10-K for the year ended March 31, 2016, as filed with the SEC. The Compensation Committee has historically set the compensation for our executive officers at the beginning of each fiscal year. In March 2013, the Company changed its fiscal year end from December 31st to March 31st. As a result of this change in fiscal year, the Option Awards issued to our named executive officers for purposes of their Fiscal 2015 compensation actually occurred at the end of our newly defined Fiscal 2014 and is reported in Fiscal 2014 in the table above. The Stock Awards reported for Fiscal 2014 for our chief executive officer and former chief financial officer also include stock option awards automatically issued pursuant to the terms of an Equity Incentive Award Agreement the Company entered into with them in August 2012. Thereafter, the Compensation Committee adjusted the timing of setting the compensation of our executive officers to occur after the beginning of our newly defined fiscal year that commences each April 1st. As a result of this change, no annual compensation equity award is reported in Fiscal 2015 for our named executive officers. The Option Awards reported in the table above for Fiscal 2015 represent stock options issued to our chief executive officer and former chief financial officer pursuant to the terms of the Equity Incentive Award Agreements. The Option Awards reported for Fiscal 2016 represent our named executive officers’ long-term equity awards for Fiscal 2016.

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- (5) Excludes payments made for the reimbursement of medical insurance premiums. Mr. Renard’s other compensation includes a one-time lump sum severance payment of \$325,000, representing 12 months of base salary, at termination pursuant to a Separation Agreement and Release.

Grants of Plan-Based Awards

The following table provides information on the grants of awards made to each named executive officer during Fiscal 2016.

Name	Grant Date	No. of Units Granted Under Non-Equity Incentive Plan Awards	Payouts Under Non-Equity Incentive Plan Awards (\$)	All Other Stock Awards: Number of Shares of Stock (#)	All Other Option Awards: Number of Shares of Stock Options (#)(2)	Exercise or Base Price of Option Awards (\$/sh)	Grant Date Fair Value of Stock and Option Awards (\$)
Keith Murphy							
Annual Bonus(1)	—	—	172,000	—	—	—	—
Stock Options	6/4/2015	—	—	—	465,000	4.92	1,497,698
Stock Options(3)	2/16/2016	—	—	—	24,690	2.04	31,680
Sharon Presnell, Ph.D.							
Annual Bonus(1)	—	—	86,812	—	—	—	—
Stock Options	6/4/2015	—	—	—	130,000	4.92	418,711
Eric David, MD, JD							
Annual Bonus(1)	—	—	72,080	—	—	—	—
Stock Options	6/4/2015	—	—	—	130,000	4.92	418,711
Jennifer Kinsbruner Bush, JD							
Annual Bonus(1)	—	—	88,573	—	—	—	—
Stock Options	6/4/2015	—	—	—	125,000	4.92	402,607
Barry Michaels(4)							
Annual Bonus(1)	—	—	79,172	—	—	—	—
Stock Options	6/4/2015	—	—	—	255,000	4.92	821,318
Stock Options(3)	8/23/2015	—	—	—	100,692	2.32	152,414
Michael Renard(5)							
Annual Bonus(1)	—	—	56,875	—	—	—	—
Stock Options	6/4/2015	—	—	—	130,000	4.92	418,711

- (1) The amounts shown reflect payments under our annual performance-based cash incentive program for Fiscal 2016, under which the named executive officers were eligible to receive a cash bonus based on a percentage of base salary upon the achievement of certain pre-established corporate and individual performance measures approved by the Compensation Committee. The named executive officers received payouts pursuant to this program for Fiscal 2016. Please see “Executive Compensation – Compensation Discussion and Analysis” for more information regarding our annual performance-based cash incentive plan.
- (2) The stock options were granted under our stock incentive plan. The stock options generally vest 25% on the first anniversary of the date of grant, with the remaining rights vesting quarterly over the remaining three years.
- (3) These stock options were automatically issued pursuant to the terms of an Equity Incentive Award Agreement entered into with the executive officer in August 2012. The Equity Incentive Award Agreement provides that the executive officer can pay applicable federal and state withholding taxes upon the vesting of RSUs that the Company issued to the executive officer in August 2012 by returning an equivalent number of shares to the Company for cancellation on the applicable vesting date. If the executive officer returns shares to the Company for cancellation, the executive officer is automatically issued a stock option for that number of shares of common stock returned to the Company as payment for applicable federal and state withholding taxes. The stock option is fully vested and has an exercise price equal to the closing sale price of the Company’s common stock on the applicable vesting date.
- (4) Mr. Michaels retired from the Company, effective April 1, 2016.
- (5) Mr. Renard resigned from the Company as a result of a permanent disability, effective October 3, 2015.

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Outstanding Equity Awards

The following table shows certain information regarding outstanding equity awards as of March 31, 2016 for the named executive officers.

	Option Awards				Stock Awards	
	No. Of Securities Underlying Unexercised Options (#) Exercisable	No. Of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of shares or Units of stock that have not vested (#)	Market Value of shares or Units of stock that have not vested (\$)
Keith Murphy	24,690(19)	—	4.58	2/13/2023	—	—
	161,250(9)	53,750	3.93	3/12/2023		
	54,654(11)	—	5.60	8/27/2023		
	27,105(12)	—	9.92	2/12/2024		
	27,307(13)	—	9.86	2/19/2024		
	275,000(14)	275,000	9.86	2/19/2024		
	28,008(20)	—	6.34	2/13/2025		
	0(16)	465,000	4.92	6/4/2025		
	24,690(4)	—	2.04	2/13/2026		
Sharon Presnell, Ph.D.	622,192(6)	—	0.08	10/14/2021	—	—
	164,063(3)	10,937	2.25	4/18/2022		
	75,000(9)	25,000	3.93	3/12/2023		
	77,500(14)	77,500	9.86	2/19/2024		
	0(16)	130,000	4.92	6/4/2025		
Eric David, MD, JD	562,500(7)	37,500	1.65	7/23/2022	—	—
	75,000(9)	25,000	3.93	3/12/2023		
	70,000(14)	70,000	9.86	2/19/2024		
	0(16)	130,000	4.92	6/4/2025		
Jennifer Kinsbruner Bush, JD	56,250(18)	93,750	6.84	11/6/2024	—	—
	0(16)	125,000	4.92	6/4/2025		
Barry Michaels(1)	23,437(3)	3,906	2.25	4/18/2022	—	—
	32,068(5)	—	2.10	8/23/2022		
	69,683(9)	25,000	3.93	3/11/2023		
	102,147(10)	—	5.50	8/23/2023		
	150,000(14)	150,000	9.86	2/19/2024		
	102,760(15)	—	7.94	8/23/2025		
	0(16)	255,000	4.92	6/4/2025		
	100,692(17)	—	2.32	8/23/2025		
Michael Renard(2)	500,000(8)	—	1.65	7/23/2022	—	—
	100,000(9)	—	3.93	3/12/2023		
	155,000(14)	—	9.86	2/19/2024		
	130,000(16)	—	4.92	6/4/2025		

(1) Mr. Michaels retired from the Company effective April 1, 2016.

(2) Mr. Renard resigned from the Company, as a result of a permanent disability, effective October 3, 2015. All stock options became vested and exercisable upon the date of resignation.

(3) 25% of the stock options vested and became exercisable on April 18, 2013, with the remaining option shares vesting in equal quarterly amounts over the following three years. On March 31, 2016, Mr. Michaels exercised options to purchase 35,157 shares, with 23,437 option shares vested and exercisable and 3,906 option shares remaining unvested. On March 31, 2016, Dr. Presnell had 164,063 option shares vested and exercisable and 10,937 option shares remaining unvested.

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- (4) Upon the return of vested shares of common stock by Mr. Murphy for forfeiture to cover tax liability related to the vesting of 50,000 restricted stock units, stock options were granted on February 13, 2016 with immediate vesting at an exercise price equal to the closing price of our common stock of \$2.04 on that date.
- (5) As of March 31, 2016, Mr. Michaels had exercised his stock option for 47,619 shares, with the remaining 32,068 option shares vested and exercisable.
- (6) 25% of the stock options vested and became exercisable on May 2, 2012, with the remaining option shares vesting 25% annually over the next three years. As of March 31, 2016, Dr. Presnell had exercised her stock option to purchase 274,064 shares, with 622,192 options shares vested and exercisable.
- (7) 25% of the stock options vested and became exercisable on May 14, 2013, with the remaining option shares vesting in equal quarterly amounts over the remaining three years.
- (8) 25% of the stock options vested and became exercisable on April 30, 2013, with the remaining option shares vesting in equal quarterly amounts over the remaining three years. As of March 31, 2016, Mr. Renard had exercised his stock option for 100,000 shares, with the remaining option shares vested and exercisable.
- (9) 25% of the stock options vested and became exercisable on January 1, 2014, with the remaining option shares vesting in equal quarterly amounts over the remaining three years. As of March 31, 2016, Mr. Michaels had exercised his stock option to purchase 5,319 shares, with 69,683 option shares vested and exercisable and 25,000 shares unvested.
- (10) Upon the return of vested shares of common stock by Mr. Michaels for forfeiture to cover tax liability related to the vesting of 187,500 RSUs, stock options were granted on August 23, 2013 with immediate vesting at an exercise price equal to the closing price of our common stock of \$5.50 on that date.
- (11) Upon return of vested shares of common stock by Mr. Murphy for forfeiture to cover tax liability related to the vesting of 100,000 performance based restricted stock units, stock options were granted on August 28, 2013 with immediate vesting at an exercise price equal to the closing price of our common stock of \$5.60 on that date.
- (12) Upon the return of vested shares of common stock by Mr. Murphy for forfeiture to cover tax liability related to the vesting of 50,000 restricted stock units, stock options were granted on February 13, 2014 with immediate vesting at an exercise price equal to the closing price of our common stock of \$9.92 on that date.
- (13) Upon the return of vested shares of common stock by Mr. Murphy for forfeiture to cover tax liability related to the vesting of 50,000 performance based restricted stock units, stock options were granted on February 19, 2014 with immediate vesting at an exercise price equal to the closing price of our common stock of \$9.86 on that date.
- (14) 25% of the stock options vest and became exercisable on February 19, 2015, with the remaining option shares vesting in equal quarterly amounts over the following three years.
- (15) Upon the return of vested shares of common stock by Mr. Michaels for forfeiture to cover tax liability related to the vesting of 187,500 restricted stock units, stock options were granted on August 23, 2014 with immediate vesting at an exercise price equal to the closing price of our common stock of \$7.94 on that date.
- (16) 25% of the stock options vest and became exercisable on June 4, 2016, with the remaining option shares vesting in equal quarterly amounts over the following three years.
- (17) Upon the return of vested shares of common stock by Mr. Michaels for forfeiture to cover tax liability related to the vesting of 187,500 restricted stock units, stock options were granted on August 23, 2015 with immediate vesting at an exercise price equal to the closing price of our common stock of \$2.32 on that date.
- (18) 25% of the stock options vest and became exercisable on September 2, 2015, with the remaining option shares vesting in equal quarterly amounts over the following three years.
- (19) Upon the return of vested shares of common stock by Mr. Murphy for forfeiture to cover tax liability related to the vesting of 50,000 restricted stock units, stock options were granted on February 13, 2013 with immediate vesting at an exercise price equal to the closing price of our common stock of \$4.58 on that date.
- (20) Upon the return of vested shares of common stock by Mr. Murphy for forfeiture to cover tax liability related to the vesting of 50,000 restricted stock units, stock options were granted on February 13, 2015 with immediate vesting at an exercise price equal to the closing price of our common stock of \$6.34 on that date.

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Option Exercises and Stock Vested

The following table sets forth the number of shares acquired and the value realized upon exercise of stock options and vesting of stock awards during Fiscal 2016 by each of our named executive officers.

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)(1)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$)(2)
Keith Murphy	—	—	50,000	102,000
Sharon Presnell, Ph.D.	—	—	—	—
Eric David, MD, JD	—	—	—	—
Jennifer Kinsbruner Bush, JD	—	—	—	—
Barry Michaels(3)	—	—	187,500	435,000
Michael Renard(4)	—	—	—	—

- (1) The value realized on vesting is determined by multiplying the number of shares exercised by the market value of the underlying shares on the exercise date less the exercise price of the shares.
- (2) The value realized on vesting is determined by multiplying the number of shares that vested during Fiscal 2016, times the closing price of our common stock on NYSE MKT on the applicable vesting date.
- (3) Mr. Michaels retired from the Company effective April 1, 2016.
- (4) Mr. Renard resigned from the Company as a result of a permanent disability, effective October 3, 2016.

Potential Payments upon Termination or Change of Control

As described in “Compensation Discussion and Analysis – Severance Plan Participation Agreements” we entered into Severance and Change in Control Plan Participation Agreements with our current named executive officers. The following table sets forth the amounts payable to each of our current named executive officers based on an assumed termination as of March 31, 2016 based upon certain designated events.

Name	Base Salary (\$)	Health and Other Insurance Benefits (\$)	Stock Options (Unvested and Accelerated) (\$)(1)	Restricted Stock Units (Unvested and Accelerated) (\$)(2)	Fiscal Year 2016 Total (\$)(3)
Keith Murphy					
Termination for reasons other than Cause, death or Disability, or for Good Reason	1,000,000	35,645	—	—	1,035,645
Termination in connection with a Change of Control	1,000,000	35,645	—	—	1,035,645
Sharon Presnell, Ph.D.					
Termination for reasons other than Cause, death or Disability, or for Good Reason	350,000	23,508	—	—	373,508
Termination in connection with a Change of Control	350,000	23,508	—	—	373,508
Eric David, MD, JD					
Termination for reasons other than Cause, death or Disability, or for Good Reason	325,000	23,465	—	—	348,465
Termination in connection with a Change of Control	325,000	23,465	19,500	—	367,965
Jennifer Kinsbruner Bush, JD					
Termination for reasons other than Cause, death or Disability, or for Good Reason	325,000	7,438	—	—	332,438
Termination in connection with a Change of Control	325,000	7,438	—	—	332,438

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- (1) Requires a change of control plus a qualifying termination of employment before vesting of options would be accelerated. The value of the accelerated options is determined by multiplying (a) the difference between the closing price of our common stock on the NYSE MKT on the assumed termination date and the applicable exercise price of each option, by (b) the number of unvested and accelerated options.
- (2) Requires a change of control plus a qualifying termination of employment before vesting of RSUs would be accelerated. The values of the accelerated RSUs were determined by multiplying the closing price of our common stock on the assumed termination date by the number of unvested and accelerated RSUs.
- (3) Payment of Base Salary and Health and Other Benefits is payable upon a termination for reasons other than Cause, death or disability or by the employee for Good Reason prior to a change in control or up to 12 months after a change in control.

Mr. Renard resigned from the Company as a result of a permanent disability, effective October 3, 2015, prior to the adoption of the Severance and Change in Control Plan Participation Agreements. In connection with his resignation, as further described under “Compensation Discussion and Analysis – Separation Agreements with Former Executive Officers,” Mr. Renard received a lump sum severance payment in the amount of \$325,000, representing twelve months of his base salary, a prorated bonus of \$56,875, and 12 months of continued health benefits in connection with his resignation pursuant to the terms of the Agreement and Release.

Mr. Michaels retired from the Company effective April 1, 2016. In connection with his retirement, as further described under “Compensation Discussion and Analysis – Separation Agreements with Former Executive Officers,” Mr. Michaels received a lump sum severance payment in the amount of \$247,701, representing six months of his base salary, accrued paid time off, and 24 months of continued health benefits pursuant to the terms of the Separation Agreement, which superseded Mr. Michaels’ Severance and Change in Control Plan Participation Agreement.

DIRECTOR COMPENSATION

Our directors play a critical role in guiding our strategic direction and overseeing the management of our Company. Ongoing developments in corporate governance and financial reporting have resulted in an increased demand for such highly qualified and productive public company directors. The many responsibilities and risks and the substantial time commitment of being a director of a public company require that we provide adequate incentives for our directors' continued performance by paying compensation commensurate with our directors' workload. Our non-employee directors are compensated based upon their respective levels of Board participation and responsibilities, including service on Board Committees. Mr. Murphy, our Chairman, Chief Executive Officer, President, Principal Financial Officer and Principal Accounting Officer receives no separate compensation for his service as a director.

Our director compensation is overseen by the Compensation Committee, which makes recommendations to our Board of Directors on the appropriate structure for our non-employee director compensation program and the appropriate amount of compensation. Our Board of Directors is responsible for final approval of our non-employee director compensation program and the compensation paid to our non-employee directors. In connection with establishing our non-employee director compensation for Fiscal 2015, the Compensation Committee retained F.W. Cook as its independent compensation consultant. With the assistance of F.W. Cook, the Board of Directors and Compensation Committee established a philosophy of targeting total compensation for our non-employee directors at the 50th percentile of the market, based on the same peer group used in benchmarking the compensation of our executive officers remained in the best interests of the Company and its stockholders. Further, the Board established a framework for the compensation of our non-employee directors consisting of (i) annual cash retainers for Board and Committee service, (ii) meeting attendance fees and (iii) long-term equity awards consisting of stock options.

For Fiscal 2016, the Board and Compensation Committee reviewed updated market information in setting the compensation of our non-employee directors. Based on this evaluation, the Board and Compensation Committee determined it was appropriate to change the existing compensation framework for our non-employee directors by eliminating meeting attendance fees and increasing the size of the annual retainers paid for Board and Committee service, with the target total compensation offered to our non-employee directors remaining at the 50th percentile of market. As a result of this change, our framework for the compensation of our non-employee directors in Fiscal 2016 consisted of (i) annual cash retainers for Board and Committee service and (ii) long-term equity awards consisting of stock options.

Director Compensation Table

The following table sets forth the compensation earned and paid to each non-employee director for service as a director during Fiscal 2016:

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Option Awards (\$)(1)</u>	<u>Total (\$)</u>
Robert Baltera, Jr.	124,500	50,505	175,005
James Glover	74,563	50,505	125,068
Tamar Howson	71,250	50,505	121,755
Richard Heyman, Ph.D.	75,813	50,505	126,318
Kirk Malloy, Ph.D.	63,313	50,505	113,818

- (1) These amounts represent the grant date fair value of equity-based awards granted by the Company during the periods presented, determined in accordance with FASB ASC Topic 718. All awards are amortized over the vesting life of the award. For the assumptions used in our valuations, see "Note 7 – Stockholders' Equity" of our notes to consolidated financial statements in the annual report on Form 10-K for the year ended March 31, 2016, as filed with the SEC.

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Narrative Discussion of the Director Compensation Table

Annual Cash Retainers. For Fiscal 2016, the Board set the annual retainers for Board and Committee service as follows: (i) an annual cash retainer of \$50,000 for Board membership and \$100,000 for service as Lead Director; (ii) an annual cash retainer for service as a member of a committee, as follows: Audit Committee member – \$10,000, Compensation Committee member – \$7,750, Nominating & Governance Committee member – \$5,000, and Science & Technology Committee member – \$5,000; and (iii) an additional annual cash retainer for service as a Committee Chair, as follows: Audit Committee Chair – \$15,000, Compensation Committee Chair – \$10,000, Nominating & Governance Committee Chair – \$9,500, and Science & Technology Committee Chair – \$9,500. No additional meeting fees were paid to our non-employee directors.

Annual Long-Term Equity Awards. In addition to the annual cash retainers, our non-employee directors received an annual stock option award (the “Annual Option Grant”) immediately following the adjournment of the 2015 annual meeting of stockholders. The Annual Option Grant had an exercise price equal to the fair market value of a share of the Company’s common stock on the date of grant and is exercisable for that number of shares equal to 0.04% of the outstanding shares of common stock of the Company on the date of grant, with the number of shares subject to the option rounded to the nearest 500 shares. Each such Annual Option Grant vests in full on the earlier of (i) one year from the date of grant or (ii) the next annual meeting of stockholders held by the Company, subject to acceleration in the event of a change of control.

Initial Long-Term Equity Awards. During Fiscal 2016, our non-employee director compensation program also provided that a non-employee director would receive an initial stock option grant upon first being elected or appointed to the Board (the “Initial Option Grant”). The Initial Option Grant is exercisable for that number of shares of the Company’s common stock equal to 0.07% of the outstanding shares of common stock of the Company on the date of grant, with the number of shares subject to the option rounded to the nearest 500 shares. The Initial Option Grant vests quarterly over three years, subject to accelerated vesting in the event of a change of control. The Initial Option Grant has an exercise price equal to the fair market value of the Company’s common stock on the date of grant. Because none of our non-employee directors first joined the Board during Fiscal 2016, none of our non-employee directors received an Initial Option Grant during this period.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

From April 1, 2015 (the beginning of our 2016 fiscal year) through March 31, 2016, there have not been any transaction or series of similar transactions to which we were or are a party in which the amount involved exceeded or exceeds \$120,000 and in which any of our directors or executive officers, any holder of more than 5% of any class of our voting securities or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than the compensation arrangements described in “Executive Compensation.”

Related Party Transaction Policy and Procedures

Pursuant to our Related Party Transaction Policy and Procedures, our executive officers, directors, and principal stockholders, including their immediate family members and affiliates, are prohibited from entering into a related party transaction with us without the prior consent of our Audit Committee or our independent directors. Any request for us to enter into a transaction with an executive officer, director, principal stockholder, or any of such persons’ immediate family members or affiliates, in which the amount involved exceeds \$120,000 must first be presented to our Audit Committee for review, consideration and approval. In approving or rejecting the proposed agreement, our Audit Committee will consider the relevant facts and circumstances available and deemed relevant, including, but not limited, to the risks, costs and benefits to us, the terms of the transaction, the availability of other sources for comparable services or products, and, if applicable, the impact on a director’s independence. Our Audit Committee shall approve only those agreements that, in light of known circumstances, are in, or are not inconsistent with, our best interests, as our Audit Committee determines in the good faith exercise of its discretion.

PROPOSAL ONE
ELECTION OF DIRECTOR

At the Annual Meeting, our stockholders will vote on the election of one Class II director to serve for a three-year term until our 2019 Annual Meeting of Stockholders and until her successor is elected and qualified. The Board has unanimously nominated Tamar Howson for election to the Board as a Class II director. Ms. Howson is currently serving as a Class II director.

Vote Required and Board Recommendation

Under our Certificate of Incorporation and Bylaws, the Class II director will be elected by a plurality of the votes cast in person or by proxy at the Annual Meeting assuming a quorum is present, which means that the director nominee receiving the highest number of “FOR” votes will be elected. If you hold your shares through a broker and you do not instruct the broker on how to vote on this proposal, your broker will not have authority to vote your shares. Abstentions and broker non-votes will each be counted as present for purposes of determining the presence of a quorum, but will not have any effect on the outcome of the proposal.

Ms. Howson has indicated her willingness to serve if elected, but if she should be unable or unwilling to stand for election, the shares represented by proxies may be voted for a substitute as the Company may designate, unless a contrary instruction is indicated in the proxy.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT THE STOCKHOLDERS VOTE FOR AND SOLICITS PROXIES IN FAVOR OF TAMAR HOWSON.

Unless otherwise instructed, it is the intention of the persons named as proxy holders in the proxy card to vote shares represented by properly executed proxy cards for the election of Tamar Howson.

PROPOSAL TWO

**RATIFICATION OF APPOINTMENT OF MAYER HOFFMAN MCCANN P.C. AS
THE COMPANY'S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

At the Annual Meeting, our stockholders will be asked to ratify the appointment of Mayer Hoffman McCann P.C. ("Mayer Hoffman") as our independent registered public accounting firm for the fiscal year ending March 31, 2017. Representatives of Mayer Hoffman are expected to be present at the Annual Meeting, and will have the opportunity to make statements if they desire to do so and to respond to appropriate questions. Mayer Hoffman has served as our independent registered public accounting firm since February 8, 2012, the date we completed our reverse merger transaction and became a public reporting company.

In the event our stockholders fail to ratify the appointment of Mayer Hoffman, the Audit Committee will reconsider its selection. In addition, even if our stockholders ratify the selection, the Audit Committee in its discretion may direct the appointment of a different independent registered public accounting firm at any time during the year if it believes that a change would be in the best interests of the Company and its stockholders.

Audit and Non-Audit Fees

Our Audit Committee is responsible for approving the engagement of Mayer Hoffman as our independent registered public accounting firm for the fiscal year ending March 31, 2017. Mayer Hoffman has advised us that it leases substantially all of its personnel, who work under the control of Mayer Hoffman's shareholders, from wholly-owned subsidiaries of CBIZ, Inc., including CBIZ MHM, LLC, in an alternative practice structure. Accordingly, substantially all of the hours expended on Mayer Hoffman's engagement to audit the Company's financial statements for the fiscal years ended March 31, 2016 and 2015, were attributed to work performed by persons other than Mayer Hoffman's full-time, permanent employees.

The Audit Committee has and intends to continue to meet with Mayer Hoffman on a quarterly or more frequent basis. At such times, the Audit Committee has and will continue to review the services performed by Mayer Hoffman, as well as the fees charged for such services.

The following table sets forth the fees for services provided and billed by Mayer Hoffman and its affiliate CBIZ MHM, LLC, relating to the fiscal years ended March 31, 2016 and 2015.

	<u>Fiscal Year 2016</u>	<u>Fiscal Year 2015</u>
Audit fees	\$ 245,600	\$ 223,000
Audit-related fees	—	—
Tax Fees	\$ 21,500	\$ 16,000
All other fees	—	—
Total	<u>\$ 267,100</u>	<u>\$ 239,000</u>

Audit Fees: For the fiscal years ended March 31, 2016 and 2015, the aggregate audit fees billed by our independent auditors were for professional services rendered for audits and quarterly reviews of our consolidated financial statements, and assistance with reviews of registration statements and documents filed with the SEC.

Audit-Related Fees: For the fiscal years ended March 31, 2016 and 2015, there were no audit-related fees billed by our independent auditors, other than the fees described above.

Tax Fees: For the fiscal years ended March 31, 2016 and 2015, the tax-related fees billed by an affiliate of our independent auditors pertained to services related to tax return preparation and tax planning services.

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All Other Fees: For the fiscal years ended March 31, 2016 and 2015, there were no fees billed by our independent auditors for other services, other than the fees described above.

Policy on Audit Committee Pre-Approval of Audit and Permitted Non-Audit Services of Independent Auditors

The Audit Committee has determined that all services provided by Mayer Hoffman to date are compatible with maintaining the independence of such audit firm. The charter of the Audit Committee requires advance approval of all auditing services and permitted non-audit services (including the fees and terms thereof) to be performed for the Company by our independent registered public accounting firm, subject to any exception permitted by law or regulation. The Audit Committee has delegated to the Chair of the Audit Committee authority to approve permitted services, provided that the Chair reports any decisions to the Audit Committee at its next scheduled meeting.

Vote Required and Board Recommendation

If a quorum is present, the affirmative vote of a majority of the votes cast at the 2016 Annual Meeting is required for ratification of our independent registered public accounting firm. Abstentions will be counted as present for purposes of determining the presence of a quorum, but will not be considered as votes cast for or against the proposal and will therefore have no effect on the outcome of the vote.

Submission of the appointment to stockholder approval is not required. However, the Audit Committee will reconsider the appointment if it is not approved by stockholders.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT THE STOCKHOLDERS VOTE FOR THE RATIFICATION OF MAYER HOFFMAN AS THE COMPANY'S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING MARCH 31, 2017.

REPORT OF THE AUDIT COMMITTEE

The following is the report of our Audit Committee with respect to our audited financial statements included in our Annual Report on Form 10-K for the fiscal year ended March 31, 2016, filed with the SEC on June 9, 2016 (the “Form 10-K”). The information contained in this report shall not be deemed to be “soliciting material” or to be “filed” with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the Company specifically incorporates it by reference in such filing.

The Audit Committee currently consists of four directors, each of whom is an “independent director” as defined under the listing standards for the NYSE MKT and the rules and regulations of the SEC. The Audit Committee acts pursuant to a written charter that has been adopted by the Board of Directors. A copy of the charter is available on the Company’s website at www.organovo.com.

The Audit Committee oversees our financial reporting process on behalf of the Board of Directors. Management has the responsibility for the financial statements and the reporting process, including internal control systems. Our independent registered public accounting firm, Mayer Hoffman, is responsible for expressing an opinion as to the conformity of our audited financial statements with generally accepted accounting principles.

Review with Management

The Audit Committee reviewed and discussed the audited financial statements with management of the Company.

Review and Discussions with Independent Accountants

The Audit Committee met with Mayer Hoffman to review the financial statements included in the Form 10-K. The Audit Committee discussed with a representative of Mayer Hoffman the matters required to be discussed by the Statement on Auditing Standards No. 61, as amended (AICPA, Professional Standards, Vol. 1, AU Section 380), as adopted by the Public Company Accounting Oversight Board in Rule 3200T. In addition, the Audit Committee met with Mayer Hoffman, with and without management present, to discuss the overall scope of Mayer Hoffman’s audit, the results of its examinations and the overall quality of the Company’s financial reporting. The Audit Committee received the written disclosures and the letter from Mayer Hoffman required by Rule 3526 of the Public Company Accounting Oversight Board, Communication with Audit Committee Concerning Independence, and has discussed with Mayer Hoffman its independence, and satisfied itself as to the independence of Mayer Hoffman.

Conclusion

Based on the above review, discussions, and representations received, the Audit Committee recommended to the Board of Directors that the audited financial statements for the each of the fiscal years ended March 31, 2016, 2015 and 2014 be included in the Company’s Form 10-K and filed with the SEC.

The Audit Committee of the Board of Directors:

James Glover, Chair
Robert Baltera, Jr.
Tamar Howson
Richard Heyman, Ph.D.

PROPOSAL THREE

ADVISORY VOTE ON EXECUTIVE COMPENSATION

The Board of Directors is providing stockholders with the opportunity to cast an advisory vote on the compensation of our named executive officers. This proposal, commonly known as a “Say on Pay” proposal, gives you, as a stockholder, the opportunity to endorse or not endorse our executive compensation program and the compensation paid to our named executive officers as reported in this Proxy Statement.

The Say on Pay vote is advisory, and therefore not binding on the Compensation Committee or the Board. Although the vote is non-binding, the Compensation Committee and the Board will review the voting results, seek to determine the cause or causes of any significant negative voting, and take them into consideration when making future decisions regarding executive compensation.

The Compensation Committee and the Board have designed our executive compensation program to attract and retain and talented executives, to motivate them to achieve our key financial, operational, and strategic goals, and to reward them for superior performance. They also designed our compensation program to align our executive officers’ interests with those of our stockholders by rewarding their achievement of the specific corporate and individual goals approved by our Compensation Committee. The performance goals set by the Compensation Committee are focused on achieving our commercialization objectives, increasing long-term stockholder value, and advancing our product development and technology platform. Stockholders are encouraged to read the Compensation Discussion and Analysis and Executive Compensation sections of this Proxy Statement for a more detailed discussion of how our compensation program reflects the Company’s core objectives and aligns our executive officers’ interests with those of our stockholders.

Voting and Board of Directors’ Recommendation

The Board believes the Company’s executive compensation program uses appropriate structures and sound pay practices that are effective in achieving our core compensation objectives. Accordingly, the Board recommends that you vote in favor of the following resolution:

“RESOLVED, that the stockholders of Organovo Holdings, Inc. approve, on an advisory basis, the compensation of the Company’s named executive officers as disclosed pursuant to the Securities and Exchange Commission’s compensation disclosure rules, including the Compensation Discussion and Analysis and Executive Compensation sections of this Proxy Statement.”

If a quorum is present, the proposal to approve, on an advisory basis, the compensation of the Company’s named executive officers requires the affirmative vote of a majority of the votes cast at the 2016 Annual Meeting. Abstentions and broker non-votes will each be counted as present for purposes of determining the presence of a quorum. Abstentions and broker non-votes will not be considered as votes cast for or against the proposal and will therefore have no effect on the outcome of the vote.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT THE STOCKHOLDERS VOTE FOR THE APPROVAL, ON AN ADVISORY BASIS, OF THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS.

PROPOSAL FOUR

APPROVAL OF OUR 2016 EMPLOYEE STOCK PURCHASE PLAN

On June 22, 2016, our board of directors approved, subject to and contingent on stockholder approval, an Employee Stock Purchase Plan (the “2016 ESPP”). The 2016 ESPP authorizes the issuance of up to 1,500,000 shares of the Company’s common stock, subject to adjustment for certain changes in the Company’s capital structure.

Our board of directors believes the 2016 ESPP benefits the Company and its stockholders by providing Company employees with an opportunity through payroll deductions to purchase shares of our common stock, which is helpful in attracting, retaining, and motivating valued employees. In addition, the board determined that providing our employees with the opportunity to purchase shares of our common stock helps to align their interests with the interests of our stockholders. To provide an adequate reserve of shares and a mechanism to permit the Company to continue offering employees a stock purchase opportunity, our board of directors has adopted the 2016 ESPP, subject to stockholder approval. The 2016 ESPP is intended to qualify under Section 423 of the Internal Revenue Code.

Summary of the 2016 ESPP

The following is a summary of the principal features of the 2016 ESPP. This summary does not purport to be a complete description of all of the provisions of the 2016 ESPP. It is qualified in its entirety by reference to the full text of the 2016 ESPP, a copy of which has been filed with the SEC with this Proxy Statement as Appendix A, and any stockholder who desires to obtain a copy of the 2016 ESPP may do so by written request to the Company 6275 Nancy Ridge Dr., Suite 110, San Diego, California 92121, Attention: Corporate Secretary.

Share Reserve. We have reserved 1,500,000 shares of our common stock for issuance under the 2016 ESPP. The number of shares reserved under the 2016 ESPP will automatically be adjusted in the event of a stock split, stock dividend or a reverse stock split (including an adjustment to the per-purchase period share limit).

The shares reserved for issuance under the 2016 ESPP as a percentage of the Company’s common stock outstanding as of June 20, 2016 is 1.6%. The 2016 ESPP does not contain an evergreen share increase provision.

Administration. The compensation committee of our board of directors, or a subcommittee thereof, will administer the 2016 ESPP (the “Committee”).

Eligibility. All of our employees are eligible to participate if we employ them for more than 20 hours per week and for five months or more per calendar year. Eligible employees may begin participating in the 2016 ESPP at the start of any offering period.

Offering Periods. Each offering period will last a number of months determined by the Committee, not to exceed 27 months. A new offering period will begin periodically, as determined by the Committee. Offering periods may overlap or may be consecutive. Unless otherwise determined by the Committee, two offering periods of six months’ duration will begin in each year on March 1st and September 1st.

Amount of Contributions. Our 2016 ESPP permits each eligible employee to purchase common stock through payroll deductions. Each employee’s payroll deductions may not exceed 15% of the employee’s cash compensation. Each participant may purchase up to the number of shares determined by our board of directors on any purchase date, not to exceed 10,000 shares. The value of the shares purchased may not exceed \$25,000 for each calendar year in which the offering period was outstanding. Participants may withdraw their contributions at any time before stock is purchased.

Purchase Price. The price of each share of common stock purchased under our 2016 ESPP will not be less than 85% of the lower of the fair market value per share of common stock on the first day of the applicable offering period or the fair market value per share of common stock on the purchase date.

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Other Provisions. Employees may end their participation in the 2016 ESPP at any time. Participation ends automatically upon termination of employment with us. The Committee may amend or terminate the 2016 ESPP at any time. The 2016 ESPP automatically terminates on June 22, 2026 unless extended by the Board of Directors, with such extension approved by the Company's stockholders.

Certain U.S. Federal Income Tax Consequences

The following is intended only as a general guide as to the United States federal income tax consequences under current law of participation in the 2016 ESPP and does not attempt to describe all possible federal or other tax consequences of such participation or tax consequences based on particular circumstances.

Generally, there are no tax consequences to an employee of either becoming a participant in the 2016 ESPP or purchasing shares under the 2016 ESPP. The tax consequences of a disposition of shares vary depending on the period such stock is held before its disposition. If a participant disposes of shares within two years after the offering date or within one year after the purchase date on which the shares are acquired (a "Disqualifying Disposition"), the participant recognizes ordinary income in the year of disposition in an amount equal to the difference between the fair market value of the shares on the purchase date and the purchase price. Any additional gain or resulting loss recognized by the participant from the disposition of the shares is a capital gain or loss. If the participant disposes of shares at least two years after the offering date and at least one year after the purchase date on which the shares are acquired, the participant recognizes ordinary income in the year of disposition in an amount equal to the lesser of (i) the difference between the fair market value of the shares on the date of disposition and the purchase price or (ii) the difference between the fair market value of the shares on the offering date and purchase price (determined as if the purchase right were exercised on the offering date). Any additional gain recognized by the participant on the disposition of the shares is a capital gain. If the fair market value of the shares on the date of disposition is less than the purchase price, there is no ordinary income, and the loss recognized is a capital loss. If the participant owns the shares at the time of the participant's death, the lesser of (i) the difference between the fair market value of the shares on the date of death and the purchase price or (ii) the difference between the fair market value of the shares on the offering date and purchase price (determined as if the purchase right were exercised on the offering date) is recognized as ordinary income in the year of the participant's death.

A capital gain or loss will be long-term if the participant holds the shares for more than 12 months and short-term if the participant holds the shares for 12 months or less.

If the participant disposes of the shares in a Disqualifying Disposition, the Company should be entitled to a deduction equal to the amount of ordinary income recognized by the participant as a result of the disposition, except to the extent such deduction is limited by applicable provisions of the Internal Revenue Code or the regulations thereunder. In all other cases, no deduction is allowed the Company.

New Plan Benefits

Because benefits under the 2016 ESPP will depend on employees' elections to participate and the fair market value of the Company's common stock at various future dates, it is not possible to determine the benefits that will be received by executive officers and other employees if the 2016 ESPP is approved by our stockholders. Non-employee directors are not eligible to participate in the 2016 ESPP.

Voting and Board of Directors' Recommendation

If a quorum is present, the affirmative vote from the holders of a majority of the outstanding shares of common stock present in person or represented by proxy at the Annual Meeting is required to approve the 2016 ESPP. Abstentions and broker non-votes will have the same effect as an "Against" vote on this proposal.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT THE STOCKHOLDERS VOTE FOR THE APPROVAL OF OUR 2016 EMPLOYEE STOCK PURCHASE PLAN.

OTHER MATTERS

The Company is not aware of any matter to be acted upon at the Annual Meeting other than the matters described in this proxy statement. However, if any other matter properly comes before the Annual Meeting, the proxy holders will vote the proxies thereon in accordance with their best judgment on such matter.

PROXY SOLICITATION

The Company will bear the expenses of calling and holding the Annual Meeting and the soliciting of proxies therefor. This Proxy Statement and the accompanying materials are being made available to stockholders, in accordance with SEC rules, by providing access to these documents on the internet instead of mailing printed copies. Most stockholders will not receive printed copies of the proxy materials unless requested. Instead, the notice provides instructions on how to access and review the proxy materials on the internet. The notice also provides instructions on how to cast your vote via the internet or by telephone. If you would like to receive a printed or email copy of our proxy materials, please follow the instructions for requesting the materials in the notice. The Company may consider the engagement of a proxy solicitation firm. Our directors, officers and employees may also solicit proxies by mail, telephone and personal contact, but they will not receive any additional compensation for these activities.

STOCKHOLDER PROPOSALS FOR 2017 ANNUAL MEETING

Stockholders interested in submitting a proposal for consideration at our 2017 Annual Meeting must do so by sending the proposal to our Corporate Secretary at Organovo Holdings, Inc., 6275 Nancy Ridge Dr., Suite 110, San Diego, California 92121. Under the SEC's proxy rules, the deadline for submission of proposals to be included in our proxy materials for the 2017 Annual Meeting is March 10, 2017. Accordingly, in order for a stockholder proposal to be considered for inclusion in our proxy materials for the 2017 Annual Meeting, any such stockholder proposal must be received by our Corporate Secretary on or before March 10, 2017, and comply with the procedures and requirements set forth in Rule 14a-8 under the Securities Exchange Act of 1934, as well as the applicable requirements of our Bylaws. Any stockholder proposal received after March 10, 2017 will be considered untimely, and will not be included in our proxy materials. In addition, stockholders interested in submitting a proposal outside of Rule 14a-8 must properly submit such a proposal in accordance with our Bylaws.

Our Bylaws require advance notice of business to be brought before a stockholders' meeting, including nominations of persons for election as directors. To be timely, notice to our Corporate Secretary must be received at our principal executive offices not less than 45 days but not more than 75 days prior to the one-year anniversary of the date on which the Company first mailed its proxy materials or a notice of availability of proxy materials (whichever is earlier) for the 2016 Annual Meeting (i.e., July 8, 2017) and must contain specified information concerning the matters to be brought before such meeting and concerning the stockholder proposing such matters. Therefore, to be presented at our 2017 Annual Meeting, such a proposal must be received by the Company on or after April 24, 2017 but no later than May 24, 2017. If the date of the 2017 Annual Meeting is advanced by more than 30 days, or delayed by more than 60 days, from the anniversary date of the 2016 Annual Meeting, notice must be received no earlier than the 120th day prior to such Annual Meeting and not later than the close of business on the later of (i) the 90th day prior to such Annual Meeting or (ii) the 10th day following the day on which the public announcement of the date of such Annual Meeting is first made.

HOUSEHOLDING OF ANNUAL MEETING MATERIALS

We have adopted “householding,” a procedure approved by the SEC under which stockholders who share an address will receive a single copy of the Annual Report, Proxy Statement and Notice. This procedure reduces printing costs and mailing fees, while also reducing the environmental impact of the distribution of documents related to the Annual Meeting. If you reside at the same address as another Organovo Holdings, Inc. stockholder and wish to receive a separate copy of the Annual Meeting materials, you may do so by making a written or oral request to: Organovo Holdings, Inc., 6275 Nancy Ridge Dr., Suite 110, San Diego, California 92121, Attn: Corporate Secretary, telephone (858) 224-1000. Upon your request, we will promptly deliver a separate copy to you. The Annual Report, Proxy Statement and Notice are also available at www.proxydocs.com/onvo.

Some brokers household proxy materials, delivering a single proxy statement or notice to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be householding materials to your address, householding will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in householding and would prefer to receive a separate proxy statement or notice, please notify your broker directly. You may also write to: Continental Stock Transfer and Trust, 17 Battery Place, 8th Floor, New York, NY 10004, Attention: Kevin Jennings , and include your name, the name of your broker or other nominee, and your account number(s). Any stockholders who share the same address and currently receive multiple copies of the Annual Report, Proxy Statement and Notice who wish to receive only one copy in the future may contact their bank, broker, or other holder of record, or Organovo Holdings, Inc. at the contact information listed above, to request information about householding.

ANNUAL REPORT ON FORM 10-K

The Company filed an Annual Report on Form 10-K for the year ended March 31, 2016 with the Securities and Exchange Commission. A copy of the Company's Annual Report on Form 10-K will also be made available (without exhibits), free of charge, to interested stockholders upon written request to Organovo Holdings, Inc., 6275 Nancy Ridge Dr., Suite 110, San Diego, California 92121, Attention: Corporate Secretary. The Annual Report on Form 10-K is not incorporated into this Proxy Statement and is not considered to be proxy-soliciting material.

BY ORDER OF THE BOARD OF DIRECTORS



Keith Murphy
*Chairman of the Board, Chief Executive Officer,
President, Principal Financial Officer and Principal Accounting Officer*

July 8, 2016

ORGANOVO HOLDINGS, INC.

2016 EMPLOYEE STOCK PURCHASE PLAN

SECTION 1. PURPOSE OF THE PLAN.

The Board adopted the Plan effective as of June 22, 2016, contingent on shareholder approval. The purpose of the Plan is to provide Eligible Employees with an opportunity to increase their proprietary interest in the success of the Company by purchasing Stock from the Company on favorable terms and to pay for such purchases through payroll deductions or other approved contributions.

SECTION 2. ADMINISTRATION OF THE PLAN.

(a) *Committee Composition.* The Committee shall administer the Plan. The Committee shall consist exclusively of one or more members of the Board, who shall be appointed by the Board.

(b) *Committee Responsibilities.* The Committee shall interpret the Plan and make all other policy decisions relating to the operation of the Plan. The Committee may adopt such rules, guidelines and forms as it deems appropriate to implement the Plan. The Committee's determinations under the Plan shall be final and binding on all persons.

SECTION 3. STOCK OFFERED UNDER THE PLAN.

(a) *Authorized Shares.* The number of shares of Stock available for purchase under the Plan shall be 1,500,000 shares of the Company's Stock (subject to adjustment pursuant to Subsection (c) below), plus the additional shares described in Subsection (b) below. Shares of Stock issued pursuant to the Plan may be authorized but unissued shares or treasury shares.

(b) *Anti-Dilution Adjustments.* In the event that any dividend or other distribution (whether in the form of cash, stock or other securities or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of stock or other securities of the Company, or other similar change in the corporate structure of the Company affecting the Stock and effected without receipt or payment of consideration by the Company occurs, then in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, there will be a proportionate adjustment of the number and class of Stock that may be delivered under the Plan, the Purchase Price per share and the number of shares of Stock covered by each option under the Plan which has not yet been exercised, and the numerical limits of Sections 3(a), 3(b)(ii) and 9(c).

(c) *Reorganizations.* Any other provision of the Plan notwithstanding, in the event of a Corporate Reorganization, the Plan may be continued or assumed by the surviving corporation or its parent corporation. If such acquirer refuses to continue or assume the Plan, then, immediately prior to the effective time of the Corporate Reorganization, any Offering Period then in progress shall terminate, and, a new Purchase Date for each such Offering Period will be set, immediately prior to the effective time of the Corporate Reorganization. In the event a new Purchase Date is set under this Section 3(d), Participants will be given notice of the new Purchase Date. The Plan shall in no event be construed to restrict in any way the Company's right to undertake a dissolution, liquidation, merger, consolidation or other reorganization.

SECTION 4. ENROLLMENT AND PARTICIPATION.

(a) *Offering Periods and Purchase Periods.*

(i) *Base Offering Periods.* The Committee may establish Offering Periods of such frequency and duration as it may from time to time determine as appropriate (the “**Base Offering Periods**”); provided that a Base Offering Period shall in no event be longer than 27 months (or such other period as may be imposed under applicable tax law). The Base Offering Periods are intended to qualify under Code Section 423. Unless changed by the Committee, the Plan shall operate such that two Base Offering Periods, each of six months’ duration and each including a single six-month Purchase Period, will commence on March 1 and September 1 of each year, except that the Committee may determine that the first Base Offering Period applicable to the Eligible Employees of a new Participating Company shall commence on any later date specified by the Committee.

(ii) *Additional Offering Periods.* At the discretion of the Committee, additional Offering Periods (the “**Additional Offering Periods**”) may be conducted under the Plan or, if necessary or advisable, in the sole discretion of the Committee, under a separate sub-plan or sub-plans permitting grants to Eligible Employees of certain Participating Companies (each, a “**Sub-Plan**”). Such Additional Offering Periods may, but need not, qualify under Code Section 423, and will be designed to achieve desired tax objectives in particular locations outside the United States of America or to comply with local laws applicable to offerings in such foreign jurisdictions. The Committee shall determine the commencement and duration of each Additional Offering Period, and Additional Offering Periods may be consecutive or overlapping. The other terms and conditions of each Additional Offering Period shall be those set forth in this Plan document or in the applicable Sub-Plan, with such changes or additional features as the Committee determines necessary to comply with local law. Each Sub-Plan shall be considered a separate plan from the Plan (the “**Statutory Plan**”). The total number of Shares authorized to be issued under the Plan as provided in Section 3 above applies in the aggregate to both the Statutory Plan and any Sub-Plan. Unless otherwise superseded by the terms of such Sub-Plan, the provisions of this Plan document shall govern the operation of such Sub-Plan.

(iii) *Separate Offerings.* Each Base Offering Period and Additional Offering Period conducted under the Plan or any Sub-Plan is intended to constitute a separate “offering” for purposes of Code Section 423.

(iv) *Equal Rights and Privileges.* To the extent an Offering Period is intended to qualify under Code Section 423, all participants in such Offering Period shall have the same rights and privileges with respect to their participation in such Offering Period in accordance with Code Section 423 and the regulations thereunder except for differences that may be mandated by local law and are consistent with the requirements of Code Section 423(b)(5).

(b) [Intentionally Left Blank].

(c) *Enrollment.*

In the case of any individual who qualifies as an Eligible Employee on the first day of any Offering Period, he or she may elect to become a Participant on such day by filing the prescribed enrollment form with the Company. The enrollment form shall be filed at the prescribed location at least 10 business days (or such other period as the Committee or its designee may designate) prior to such day.

(d) *Duration of Participation.* Once enrolled in the Plan, a Participant shall continue to participate in the Plan until he or she:

(i) Reaches the end of the Offering Period or Purchase Period, as applicable, in which his or her employee contributions were discontinued under Section 5(c) or 9(b);

(ii) Is deemed to withdraw from the Plan under Subsection (b) above;

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- (iii) Withdraws from the Plan under Section 6(a); or
- (iv) Ceases to be an Eligible Employee.

A Participant whose employee contributions were discontinued automatically under Section 9(b) shall automatically resume participation as described therein. In all other cases, a former Participant may again become a Participant, if he or she then is an Eligible Employee, by following the procedure described in Subsection (c) above.

SECTION 5. EMPLOYEE CONTRIBUTIONS.

(a) *Commencement of Payroll Deductions.* A Participant may purchase shares of Stock under the Plan by means of payroll deductions or (if so approved by the Committee with respect to all Participants) other approved contributions in form and substance satisfactory to the Committee. Payroll deductions or other approved contributions shall commence as soon as reasonably practicable after the Company has received the prescribed enrollment form. In jurisdictions where payroll deductions are not permitted under local law, Participants may purchase shares of Stock by making contributions in the form that is acceptable and approved by the Committee.

(b) *Amount of Payroll Deductions.* An Eligible Employee shall designate on the prescribed enrollment form the portion of his or her Compensation that he or she elects to have withheld for the purchase of Stock. Such portion shall be a whole percentage of the Eligible Employee's Compensation, but not less than 1% nor more than 15%.

(c) *Reducing Withholding Rate or Discontinuing Payroll Deductions.* If a Participant wishes to reduce his or her rate of payroll withholding, such Participant may do so by filing a new enrollment form with the Company at the prescribed location at any time. The new withholding rate shall be effective as soon as reasonably practicable after the Company has received such form. The new withholding rate may be 0% or any whole percentage of the Participant's Compensation, but not more than his or her old withholding rate. No Participant shall make more than one election under this Subsection (c) during any Purchase Period. (In addition, employee contributions may be discontinued automatically pursuant to Section 9(b).)

(d) *Increasing Withholding Rate.* If a Participant wishes to increase his or her rate of payroll withholding, such Participant may do so by filing a new enrollment form with the Company at the prescribed location at any time. The new withholding rate may be effective on the first day of the next-upcoming Offering Period in which the Participant participates, provided that the Participant has filed the enrollment form with the Company at the prescribed location at least 10 business days (or such other period as the Committee or its designee may designate) prior to such day. The new withholding rate may be any whole percentage of the Participant's Compensation, but not less than 1% nor more than 15%. An increase in a Participant's rate of payroll withholding may not take effect during an Offering Period.

SECTION 6. WITHDRAWAL FROM THE PLAN.

(a) *Withdrawal.* A Participant may elect to withdraw from the Plan (or, if applicable, from an Offering Period) by filing the prescribed form with the Company at the prescribed location at any time before a Purchase Date. As soon as reasonably practicable thereafter, payroll deductions or other approved contributions shall cease and the entire amount credited to the Participant's Plan Account with respect to such Offering Period shall be refunded to him or her in cash, without interest (except as otherwise required by the laws of the local jurisdiction). No partial withdrawals from an Offering Period shall be permitted.

(b) *Re-Enrollment After Withdrawal.* A former Participant who has withdrawn from the Plan shall not be a Participant until he or she re-enrolls in the Plan under Section 4(c). Re-enrollment may be effective only at the commencement of an Offering Period.

SECTION 7. CHANGE IN EMPLOYMENT STATUS.

(a) *Termination of Employment.* Termination of employment as an Eligible Employee for any reason, including death, shall be treated as an automatic withdrawal from the Plan under Section 6(a). (A transfer from one Participating Company to another shall not be treated as a termination of employment provided that each Participating Company is then participating in the same Offering Period.)

(b) *Leave of Absence.* For purposes of the Plan, employment shall not be deemed to terminate when the Participant goes on a military leave, a sick leave or another *bona fide* leave of absence, if the leave was approved by the Company in writing. Employment, however, shall be deemed to terminate on the first day following three months after the Participant goes on a leave, unless a contract or statute guarantees his or her right to return to work. Employment shall be deemed to terminate in any event when the approved leave ends, unless the Participant immediately returns to work.

(c) *Death.* In the event of the Participant's death, the amount credited to his or her Plan Account shall be paid to a beneficiary designated by him or her for this purpose on the prescribed form or, if none, to the Participant's estate. Such form shall be valid only if it was filed with the Company at the prescribed location before the Participant's death.

SECTION 8. PLAN ACCOUNTS AND PURCHASE OF SHARES.

(a) *Plan Accounts.* The Company shall maintain a Plan Account on its books in the name of each Participant. Whenever an amount is deducted from the Participant's Compensation under the Plan, such amount shall be credited to the Participant's Plan Account. Amounts credited to Plan Accounts shall not be trust funds and may be commingled with the Company's general assets and applied to general corporate purposes. Unless otherwise required by the laws of the local jurisdiction, no interest shall be credited to Plan Accounts.

(b) *Purchase Price.* The Purchase Price for each share of Stock purchased on a Purchase Date shall be the lower of:

- (i) 85% of the Fair Market Value of such share on the first day of such Offering Period; or
- (ii) 85% of the Fair Market Value of such share on the Purchase Date.

(c) *Number of Shares Purchased.* On each Purchase Date, each Participant shall be deemed to have elected to purchase the number of shares of Stock calculated in accordance with this Subsection (c), unless the Participant has previously elected to withdraw from the Offering Period in accordance with Section 6(a). The amount then in the Participant's Plan Account shall be divided by the Purchase Price, and the number of shares that results shall be purchased from the Company with the funds in the Participant's Plan Account. The foregoing number of shares of Stock purchasable by a Participant are subject to the limitations set forth in Section 9. The Committee may determine with respect to all Participants that any fractional share, as calculated under this Subsection (c), shall be (i) rounded down to the next lower whole share or (ii) credited as a fractional share.

(d) *Available Shares Insufficient.* In the event that the aggregate number of shares that all Participants elect to purchase with respect to a particular Purchase Period exceeds (i) the number of shares of Stock that were available under Section 3 above for sale under the Plan on the first day of the applicable Offering Period, or (ii) the number of shares that were available under Section 3 above for sale under the Plan on the applicable Purchase Date, then the number of shares to which each Participant is entitled shall be determined by multiplying the number of shares available for issuance by a fraction. The numerator of such fraction is the number of shares that such Participant has elected to purchase, and the denominator of such fraction is the number of shares that all Participants have elected to purchase. The Company may make a pro rata allocation of the shares available on the first day of an applicable Offering Period pursuant to the preceding sentence, notwithstanding any authorization of additional shares for issuance under the Plan by the Company's stockholders subsequent to such date. In the

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event of a pro-rata allocation under this Section (d), the Committee may determine in its discretion to continue all Offering Periods then in effect or terminate all Offering Periods then in effect pursuant to Section 14.

(e) *Issuance of Stock.* The shares of Stock purchased by a Participant under the Plan may be registered in the name of such Participant, or jointly in the name of such Participant and his or her spouse as joint tenants with the right of survivorship or as community property (with or without the right of survivorship). The Company may permit or require that shares be deposited directly with a broker designated by the Company or to a designated agent of the Company, and the Company may utilize electronic or automated methods of share transfer. The Company may require that shares be retained with such broker or agent for a designated period of time and/or may establish other procedures to permit tracking of disqualifying dispositions of such shares. (The two preceding sentences shall apply whether or not the Participant is required to pay income tax in the United States.)

(f) *Tax Withholding.* To the extent required by applicable federal, state, local or foreign law, a Participant shall make arrangements satisfactory to the Company for the satisfaction of any withholding tax obligations that arise in connection with the Plan. The Company shall not be required to issue any shares of Stock under the Plan until such obligations, if any, are satisfied.

(g) *Unused Cash Balances.* Subject to the final sentence of Section 8(c), an amount remaining in the Participant's Plan Account that represents the Purchase Price for any fractional share shall be carried over in the Participant's Plan Account to the next Purchase Period. Any amount remaining in the Participant's Plan Account that represents the Purchase Price for whole shares that could not be purchased by reason of Subsections (c) or (d) above or Section 9(b) shall be refunded to the Participant in cash, without interest (except as otherwise required by the laws of the local jurisdiction).

(h) *Stockholder Approval.* Any other provision of the Plan notwithstanding, no shares of Stock shall be purchased under the Plan unless and until the Company's stockholders have approved the adoption of the Plan.

SECTION 9. PLAN LIMITATIONS.

(a) *Five Percent Limit.* Any other provision of the Plan notwithstanding, no Participant shall be granted a right to purchase Stock under the Plan if such Participant, immediately after his or her election to purchase such Stock, would own stock possessing more than 5% of the total combined voting power or value of all classes of stock of the Company or any parent or Subsidiary of the Company, determined in accordance with applicable tax law.

(b) *Dollar Limit.* As specified by Code Section 423(b)(8), no Participant shall be entitled to accrue rights to purchase Stock pursuant to any such rights outstanding under the Plan if and to the extent such accrual, when aggregated with (i) rights to purchase Stock accrued under any other right to purchase Stock under the Plan, and (ii) similar rights accrued under other employee stock purchase plans (within the meaning of Code Section 423) of the Company or any Related Corporation, would otherwise permit such Participant to purchase more than \$25,000 worth of Stock of the Company or any Related Corporation (determined on the basis of the Fair Market Value per share on the date such rights are granted, and which, with respect to the Plan, will be determined as of the beginning of the respective Offering Period) for each calendar year such rights are at any time outstanding.

If a Participant is precluded by this Subsection (b) from purchasing additional Stock under the Plan, then his or her employee contributions shall automatically be discontinued and shall automatically resume at the beginning of the next Offering Period with a scheduled Purchase Date in the next calendar year, provided that he or she is an Eligible Employee at the beginning of such Offering Period.

(c) *Purchase Period Share Purchase Limit.* Any other provision of the Plan notwithstanding, no Participant shall purchase more than 10,000 shares of Stock with respect to any Purchase Period; provided that

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the Committee may, for future Offering Periods, increase or decrease in its absolute discretion, the maximum number of shares of Stock that a Participant may purchase during each Purchase Period.

SECTION10. RIGHTS NOT TRANSFERABLE.

The rights of any Participant under the Plan, or any Participant's interest in any Stock or moneys to which he or she may be entitled under the Plan, shall not be transferable by voluntary or involuntary assignment or by operation of law, or in any other manner other than by beneficiary designation or the laws of descent and distribution. If a Participant in any manner attempts to transfer, assign or otherwise encumber his or her rights or interest under the Plan, other than by beneficiary designation or the laws of descent and distribution, then such act shall be treated as an election by the Participant to withdraw from the Plan under Section 6(a).

SECTION11. NO RIGHTS AS AN EMPLOYEE.

Nothing in the Plan or in any right granted under the Plan shall confer upon the Participant any right to continue in the employ of a Participating Company for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Participating Companies or of the Participant, which rights are hereby expressly reserved by each, to terminate his or her employment at any time and for any reason, with or without cause.

SECTION12. NO RIGHTS AS A STOCKHOLDER.

A Participant shall have no rights as a stockholder with respect to any shares of Stock that he or she may have a right to purchase under the Plan until such shares have been purchased on the applicable Purchase Date.

SECTION13. SECURITIES LAW REQUIREMENTS.

Shares of Stock shall not be issued, and the Company shall have no liability for failure to issue shares of Stock, under the Plan unless the issuance and delivery of such shares comply with (or are exempt from) all applicable requirements of law, including (without limitation) the Securities Act of 1933, as amended, the rules and regulations promulgated thereunder, state securities laws and regulations, and the regulations of any stock exchange or other securities market on which the Company's securities may then be traded.

SECTION14. AMENDMENT OR DISCONTINUANCE.

(a) *General Rule.* The Committee, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason. If the Plan is terminated, the Committee, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of shares of Stock on the next Purchase Date, or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to Section 3(c) or (d)). If the Offering Periods are terminated prior to expiration, all amounts then credited to Participants' accounts which have not been used to purchase shares of Stock will be returned to the Participants (without interest thereon, except as otherwise required by the laws of the local jurisdiction) as soon as administratively practicable.

(b) *Committee's Discretion.* Without stockholder consent and without limiting Section 14(a), the Committee will be entitled to change the Offering Periods, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit payroll withholding in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the Company's processing of properly completed withholding elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Stock for each Participant properly correspond with amounts

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withheld from the Participant's Compensation, and establish such other limitations or procedures as it determines in its sole discretion advisable which are consistent with the Plan.

(c) *Accounting Consideration.* In the event the Committee determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Committee may, in its discretion and, to the extent necessary or desirable, modify, amend or terminate the Plan to reduce or eliminate such accounting consequence including, but not limited to:

- (i) Amending the Plan to conform with the safe harbor definition under Financial Accounting Standards Board Accounting Standards Codification Topic 718, including with respect to an Offering Period underway at the time;
- (ii) Altering the Purchase Price for any Offering Period including an Offering Period underway at the time of the change in Purchase Price;
- (iii) Shortening any Offering Period by setting a new Purchase Date, including an Offering Period underway at the time of the Committee's action;
- (iv) Reducing the maximum percentage of Compensation a Participant may elect to set aside as payroll deductions; and
- (v) Reducing the maximum number of shares of Stock a Participant may purchase during any Purchase Period.

Such modifications or amendments will not require stockholder approval or the consent of any Plan Participants.

(d) *Stockholder Approval.* Except as provided in Section 3, any increase in the aggregate number of shares of Stock that may be issued under the Plan shall be subject to the approval of the Company's stockholders. In addition, any other amendment of the Plan shall be subject to the approval of the Company's stockholders to the extent required under Section 14(e) or by any applicable law or regulation.

(e) *Plan Termination.* The Plan shall terminate automatically 20 years after its adoption by the Board, unless (i) the Plan is extended by the Board and (ii) the extension is approved within 12 months by a vote of the stockholders of the Company.

SECTION 15. DEFINITIONS.

- (a) "**Board**" means the Board of Directors of the Company, as constituted from time to time.
- (b) "**Code**" means the Internal Revenue Code of 1986, as amended.
- (c) "**Committee**" means a committee of the Board, as described in Section 2.
- (d) "**Company**" means Organovo Holdings, Inc., a Delaware corporation.

(e) "**Compensation**" means, unless otherwise determined by the Committee, (i) cash base salary paid to a Participant by a Participating Company plus (ii) any pre-tax contributions made by the Participant under Code Sections 401(k) or 125. "Compensation" shall exclude all cash items other than base salary and shall exclude all non-cash items, moving or relocation allowances, cost-of-living equalization payments, car allowances, tuition reimbursements, imputed income attributable to cars or life insurance, severance pay, fringe benefits, contributions or benefits received under employee benefit plans, income attributable to equity compensation awards of the Company, and similar items. The Committee shall determine whether a particular item is included in Compensation.

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(f) “**Corporate Reorganization**” means:

- (i) The consummation of a merger or consolidation of the Company with or into another entity or any other corporate reorganization; or
- (ii) The sale, transfer or other disposition of all or substantially all of the Company’s assets or the complete liquidation or dissolution of the Company.

(g) “**Eligible Employee**” means a common law employee of a Participating Company who is customarily employed for five months or more per calendar year and more than 20 hours per week. The foregoing notwithstanding, an individual shall not be considered an Eligible Employee if his or her participation in the Plan is prohibited by the law of any country that has jurisdiction over him or her. In addition, the Committee may determine prior to the commencement of an Offering Period not to exclude part-time employees or exclude employees whose customary employment is for fewer hours per week or fewer months in a calendar year; provided that such terms are applied in an identical manner to all employees of every Participating Company in such Offering Period.

(h) “**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

(i) “**Fair Market Value**” means the price at which Stock was last sold in the principal U.S. market for the Stock on the applicable date or, if the applicable date was not a trading day, on the last trading day prior to the applicable date. If Stock is no longer traded on a public U.S. securities market, the Fair Market Value shall be determined by the Committee in good faith on such basis as it deems appropriate. The Committee’s determination shall be conclusive and binding on all persons.

(j) “**Offering Period**” means any period, including as the context requires Base Offering Periods and Additional Offering Periods, with respect to which the right to purchase Stock may be granted under the Plan, as determined pursuant to Section 4(a).

(k) “**Participant**” means an Eligible Employee who participates in the Plan or any Sub-Plan, as provided in Section 4.

(l) “**Participating Company**” means (i) the Company and (ii) each present or future Subsidiary designated by the Committee as a Participating Company.

(m) “**Plan**” means this Organovo Holdings, Inc. 2016 Employee Stock Purchase Plan, as it may be amended from time to time.

(n) “**Plan Account**” means the account established for each Participant pursuant to Section 8(a).

(o) “**Purchase Date**” means the last trading day of a Purchase Period.

(p) “**Purchase Period**” means a period within an Offering Period (which for an Offering Period with only a single Purchase Period would be coterminous with the Offering Period) during which contributions may be made toward the purchase of Stock under the Plan, as determined pursuant to Section 4(a).

(q) “**Purchase Price**” means the price at which Participants may purchase Stock under the Plan, as determined pursuant to Section 8(b).

(r) “**Related Corporation**” means any “parent corporation” of the Company as defined in Code Section 424(e) or any Subsidiary.

(s) “**Stock**” means the Common Stock of the Company.

(t) “**Subsidiary**” means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company, if each of the corporations other than the last corporation in the unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.



ANNUAL MEETING OF ORGANOVO HOLDINGS, INC.

Date: August 17, 2016
Time: 9:00 A.M. (local time)
Place: Green Acre Campus Pointe, 10300 Campus Point Drive, San Diego, California 92121

Please make your marks like this: Use dark black pencil or pen only

Board of Directors Recommends a Vote **FOR** proposals 1, 2, 3, and 4.

1: Election of one Class II Director.

Tamar Howson

For Withhold

For Against Abstain

2: To ratify the appointment of Mayer Hoffman McCann P.C. as our independent registered public accounting firm for the fiscal year ending March 31, 2017.

3: To hold a non-binding advisory vote on the compensation of our named executive officers.

4: To approve our 2016 Employee Stock Purchase Plan.

Note: Such other matters as may properly come before the annual meeting or any adjournment thereof.

Directors
Recommend
↓
For

For

For

For

↑ Please separate carefully at the perforation and return just this portion in the envelope provided. ↓



**Annual Meeting of Organovo Holdings, Inc.
to be held on Wednesday, August 17, 2016
for Holders as of June 20, 2016**

This proxy is being solicited on behalf of the Board of Directors



VOTE BY:



TELEPHONE

Go To
www.proxypush.com/ONVO
• Cast your vote online.
• View Meeting Documents.

OR



MAIL

855-773-1622

- Use any touch-tone telephone.
- **Have your Proxy Card/Voting Instruction Form ready.**
- Follow the simple recorded instructions.

OR

- Mark, sign and date your Proxy Card/Voting Instruction Form.
- Detach your Proxy Card/Voting Instruction Form.
- Return your Proxy Card/Voting Instruction Form in the postage-paid envelope provided.

The undersigned hereby appoints Jennifer Bush and Cy Talbot, and each or either of them, as the true and lawful proxies of the undersigned, with full power of substitution and revocation, and authorizes them, and each of them, to vote all the shares of common stock of Organovo Holdings, Inc. which the undersigned is entitled to vote at said meeting and any adjournment thereof upon the matters specified and upon such other matters as may be properly brought before the meeting or any adjournment or postponement thereof, conferring authority upon such true and lawful proxies to vote in their discretion on such other matters as may properly come before the meeting and revoking any proxy heretofore given.

THE SHARES REPRESENTED BY THIS PROXY WILL BE VOTED AS DIRECTED OR, IF NO DIRECTION IS GIVEN, SHARES WILL BE VOTED FOR THE ELECTION OF THE DIRECTOR IN ITEM 1 AND FOR THE PROPOSALS IN ITEMS 2, 3, AND 4.

All votes must be received by 11:59 P.M., Eastern Time, August 16, 2016.

**PROXY TABULATOR FOR
ORGANOVO HOLDINGS, INC.
P.O. BOX 8016
CARY, NC 27512-9903**



Authorized Signatures - This section must be completed for your instructions to be executed.

_____ Please Sign Here	_____ Please Date Above
_____ Please Sign Here	_____ Please Date Above

Please sign exactly as your name(s) appears on your stock certificate. If held in joint tenancy, all persons should sign. Trustees, administrators, etc. should include title and authority. Corporations should provide full name of corporation and title of authorized officer signing the proxy.

EVENT #

CLIENT #



**Proxy — Organovo Holdings, Inc.
Annual Meeting of Stockholders
August 17, 2016, 9:00 a.m. (local time)
This Proxy is Solicited on Behalf of the Board of Directors**

The undersigned appoints Jennifer Bush and Cy Talbot (the "Named Proxies") and each or either of them as proxies for the undersigned, with full power of substitution and revocation, to vote all the shares of common stock of Organovo Holdings, Inc., a Delaware Corporation ("the Company"), which the undersigned is entitled to vote at the Annual Meeting of Stockholders of the Company to be held at Green Acre Campus Pointe, 10300 Campus Point Drive, San Diego, California 92121 on Wednesday, August 17, 2016 at 9:00 a.m. local time and all adjournments and postponements thereof.

The purpose of the Annual Meeting is to take action on the following:

1. Election of one Class II Director;
2. To ratify the appointment of Mayer Hoffman McCann P.C. as our independent registered public accounting firm for the fiscal year ending March 31, 2017;
3. To hold a non-binding advisory vote on the compensation of our named executive officers; and
4. To approve our 2016 Employee Stock Purchase Plan.

The director up for re-election is Tamar Howson.

The Board of Directors of the Company recommends a vote "FOR" the nominee for director and "FOR" each proposal.

This proxy, when properly executed, will be voted in the manner directed herein. If no direction is made, this proxy will be voted "FOR" the nominee for director and "FOR" each proposal. In their discretion, the Named Proxies are authorized to vote upon such other matters that may properly come before the Annual Meeting or any adjournments or postponements thereof.

You are encouraged to specify your choice by marking the appropriate box (SEE REVERSE SIDE) but you need not mark any box if you wish to vote in accordance with the Board of Directors' recommendations. The Named Proxies cannot vote your shares unless you sign and return this card.

To attend the meeting and vote your shares
in person, please mark this box.

↑ Please separate carefully at the perforation and return just this portion in the envelope provided. ↓