FORM 3

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

| OMB APPROVAL | | | | | | | | |
|--------------------------|-----|--|--|--|--|--|--|--|
| OMB Number: | | | | | | | | |
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Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| Name and Address of Reporting Person* Shapiro David | | | 2. Date of Event Requiring Staten (Month/Day/Year 12/04/2018 | nent | 3. Issuer Name and Ticker or Trading Symbol ORGANOVO HOLDINGS, INC. [ONVO] | | | | | | | |
|--|--------------------|--|---|---|--|--|--|------------------------------------|--|---|--|--|
| (Last) 6275 NANCY | (First) RIDGE DRIV | (Middle) E, SUITE 110 | | | | ationship of Reporting Perso c all applicable) Director Officer (give title | on(s) to Issue 10% Owne Other (spe | er | If Amendment, Date of Original Filed (Month/Day/Year) Individual or Joint/Group Filing (Check | | | |
| (Street) SAN DIEGO (City) | CA (State) | 92121 (Zip) | | | | below) | below) | o.i.y | Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person | | | |
| Table I - Non-Derivative Securities Beneficially Owned | | | | | | | | | | | | |
| 1. Title of Security (Instr. 4) | | | | | | unt of Securities ially Owned (Instr. 4) | | | 4. Nature of Indirect Beneficial Ownership (Instr. 5) | | | |
| Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) | | | | | | | | | | | | |
| 1. Title of Derivative Security (Instr. 4) | | 2. Date Exercisable and Expiration Date (Month/Day/Year) | | d 3. Title and Amount of Secur Underlying Derivative Secur | | | 4. Conver | rcise | 5. Ownership Form: | 6. Nature of Indirect Beneficial Ownership (Instr. 5) | | |
| | | | Date Exercisable | Expiratio Date | n Title | e | Amount or Number of Shares | Price of Derivative Security | | Direct (D) or Indirect (I) (Instr. 5) | | |

Explanation of Responses:

Remarks:

No securities are beneficially owned.

/s/ Jennifer Bush, as attorneyin-fact 12/06/2018

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- * If the form is filed by more than one reporting person, see Instruction 5 (b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

KNOW ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Taylor Crouch, Craig Kussman and Jennifer Bush, and each of them individually, his or her true and lawful attorney-in-fact to:

- (1) execute for and on behalf of the undersigned, in the undersigned's capacity as an officer, director and/or 10% or greater stockholder of Organovo Holdings, Inc. (the "Company"), any and all Form 3, 4 and 5 reports required to be filed by the undersigned in accordance with Section 16(a) of the Securities Exchange Act of 1934, as amended, and the rules thereunder;
- (2) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such Form 3, 4 or 5 report and timely file such report with the United States Securities and Exchange Commission and any stock exchange or similar authority; and
- (3) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of such attorney-in-fact, may be of benefit to, in the best interest of, or legally required by, the undersigned, it being understood that the documents executed by such attorney-in-fact on behalf of the undersigned, pursuant to this Power of Attorney, shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve in his discretion.

The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform each and every act and thing whatsoever requisite, necessary, and proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney-in-fact, or his substitute or substitutes, shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted. The undersigned acknowledges that no such attorney-in-fact, in serving in such capacity at the request of the undersigned, is hereby assuming, nor is the Company hereby assuming, any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934, as amended.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Form 3, 4 and 5 reports with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorneys-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 4th day of December, 2018.

/s/ David Shapiro Signature

David Shapiro Print Name