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

Post-Effective Amendment No. 1
to
FORM S-3
REGISTRATION STATEMENT
Under
THE SECURITIES ACT OF 1933

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

Delaware
(State or other jurisdiction
of incorporation or organization)

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

6275 Nancy Ridge Drive, Suite 110
San Diego, CA 92121
(858) 224-1000
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Craig Kussman
Chief Financial Officer
6275 Nancy Ridge Drive, Suite 110
San Diego, CA 92121
(858) 224-1000
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Jeffrey C. Thacker, Esq.
Ryan J. Gunderson, Esq.
Gunderson Dettmer Stough Villeneuve
Franklin & Hachigian, LLP
3570 Carmel Mountain Rd., Suite 200
San Diego, CA 92130
(858) 436-8000

Approximate date of commencement of proposed sale to the public: Not applicable. Removal from registration of securities that were not sold pursuant to this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

| | | | |
|-------------------------|--|---------------------------|-------------------------------------|
| Large Accelerated filer | <input type="checkbox"/> | Accelerated filer | <input checked="" type="checkbox"/> |
| Non-accelerated filer | <input type="checkbox"/> (Do not check if smaller reporting company) | Smaller reporting company | <input type="checkbox"/> |
| | | Emerging growth company | <input type="checkbox"/> |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act.

Deregistration of Securities

This Post-Effective Amendment No. 1 (this “Post-Effective Amendment”) relates to the Registration Statement on Form S-3 (Registration No. 333-202382) (the “Registration Statement”) of Organovo Holdings, Inc. (the “Company”), originally filed with the Securities and Exchange Commission (the “SEC”) on February 27, 2015 and declared effective by the SEC on March 17, 2015. The Registration Statement registered \$190,000,000 of an indeterminate number of shares of common stock, shares of preferred stock, debt securities and warrants, in any combination, including in units (the “Securities”). As of the date of this filing, \$102,143,200.84 of Securities remain unsold and are being removed from registration.

In accordance with an undertaking made by the Company in the Registration Statement to remove from registration, by means of a post-effective amendment, the Securities, which remain unsold at the termination of the offering, the Company hereby removes from registration all Securities registered under the Registration Statement which remain unsold as of the date hereof.

Signatures

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Post-Effective Amendment to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in San Diego, California, on March 16, 2018.

Organovo Holdings, Inc.

By: /s/ Craig Kussman
Craig Kussman
Chief Financial Officer

No other person is required to sign this Post-Effective Amendment No. 1 to the Registration Statement in reliance upon Rule 478 under the Securities Act of 1933, as amended.