UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): April 7, 2014

ORGANOVO HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Commission File Number: 001-35996

Delaware (State or other jurisdiction of incorporation) 27-1488943 (I.R.S. Employer Identification No.)

6275 Nancy Ridge Dr., San Diego, California 92121 (Address of principal executive offices, including zip code)

(858) 550-9994 (Registrant's telephone number, including area code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

□ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

□ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

Dere-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

D Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01 Regulation FD Disclosure

On April 7, 2014, Organovo Holdings, Inc. (the "Company") announced that two letters addressed to the Company's investors from Keith Murphy, the Company's Chairman and Chief Executive Officer, and from Dr. Gabor Forgacs, the Company's Scientific Founder, are available for download at http://www.organovo.com/investors/chairmans-letter-download.

The information furnished on this Form 8-K shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference into any other filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except as expressly set forth by specific reference in such a filing.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: April 7, 2014

ORGANOVO HOLDINGS, INC.

/s/ Keith Murphy

Keith Murphy Chief Executive Officer