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): December 5, 2013

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) 224-1000

(Registrant's telephone number, including area code)

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

ck 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 risions (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)
Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.01 Entry into a Material Definitive Agreement.

On December 5, 2013, Organovo Holdings, Inc. (the "Company") entered into a First Amendment (the "Amendment") to that certain Lease Agreement (the "Original Lease", together with the Amendment, the "Amended Lease"), dated as of February 27, 2012, by and between the Company and ARE — SD Region No. 25, LLC ("ARE") for the Company's corporate headquarters at 6275 Nancy Ridge Drive, Suite 110, San Diego, CA 92121. Pursuant to the Amendment, the Company expanded the size of its facility by approximately 15,268 square feet (the "Expansion Premises") from approximately 15,539 square feet (the "Original Premises") for a total of approximately 30.807 square feet. The Amended Lease provides for base rent (i) on the Original Premises to continue at approximately \$38,800 per month, with annual escalators, until August 1, 2016 at which point the base rent shall be payable at the same rate per rentable square foot as the Expansion Premises and (ii) on the Expansion Premises of approximately \$38,934 per month, with 3% annual escalators, not to commence until two months after the earlier of (A) the date that ARE delivers possession of the Expansion Premises to the Company with the work in the Expansion Lab Premises (as defined in the Amendment) substantially complete and (B) the date ARE could have delivered the Expansion Premises with the work in the Expansion Lab Premises (as defined in the Amendment) substantially complete but for certain delays of the Company. Additionally, the Company has a right of first refusal on adjacent additional premises of approximately 14,500 square feet. The term of the Amended Lease expires on the seven-year anniversary of the earlier of (A) the date that ARE delivers possession of the Expansion Premises to the Company and (B) the date ARE could have delivered the Expansion Premises but for certain delays of the Company (the "Expansion Premises Commencement Date"), with an option for the Company to extend the Amended Lease at the end of the term. The target Expansion Premises Commencement Date is September 1, 2014. The Company also has the option to terminate the Amended Lease on the 5-year anniversary of the Expansion Premises Commencement Date. The Company intends for the Expansion Premises to contain office, laboratory, and clean room areas.

The foregoing description of the terms of the Amended Lease, including the Amendment, does not purport to be complete and is qualified in its entirety by reference to the full text of the Original Lease, and the Amendment, copies of which will be filed with the Company's Quarterly Report on Form 10-Q for the period ending on December 31, 2013.

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.

ORGANOVO HOLDINGS, INC.

Date: December 5, 2013

/s/ Keith Murphy

Keith Murphy

Chief Executive Officer and President