
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): May 4, 2012

ORGANOVO HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation)

000-54621
(Commission
File Number)

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

5871 Oberlin Drive, Suite 150,
San Diego, CA
(Address of principal executive offices)

92121
(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:

- 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))
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Item 8.01 Other Events

In March 2009, Organovo Holdings, Inc. (the “Company”), through its wholly-owned subsidiary Organovo, Inc., obtained a world-wide exclusive license to a suite of intellectual property owned by the University of Missouri-Columbia, including a patent application titled “Self-Assembling Multicellular Bodies and Methods of Producing a Three-Dimensional Biological Structure Using the Same.” The Company received official notification that the U.S. Patent and Trademark Office (the “USPTO”) issued a patent (No. 8,143,055) for the above mentioned patent application. The patent provides the Company with intellectual property rights to create cellular aggregates, to use cellular aggregates to create engineered tissue, and to employ cellular aggregates to create engineered tissue with no scaffold present.

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: May 4, 2012

By: /s/ Barry Michaels

Name: Barry Michaels

Title: Chief Financial Officer