FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

| OMB APPR | ROVAL |
|----------------------|-----------|
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| 1. Name and Address of Reporting Person* MICHAELS BARRY D | | | | | 2. Issuer Name and Ticker or Trading Symbol ORGANOVO HOLDINGS, INC. [ONVO] | | | | | | | | neck all appli Direct | cable) or | g Person(s) to Issu 10% O | | wner | |
|--|---|--|---|--|--|---|--|-----|--|--|--------------------|--|---|------------------------|---|---------------------|--|---------------------------------------|
| (Last) (First) (Middle) 5871 OBERLIN DRIVE SUITE 150 | | | | 03 | 3/16/2 | | | | | | | below) | Chief Financial Officer | | | | | |
| (Street) SAN DIEGO CA 92121 | | | | | | 4. If Amendment, Date of Original Filed (Month/Day/Year) 03/20/2012 | | | | | | | 6. Lir | e) X Form | lividual or Joint/Group Filing (Check Applicable Form filed by One Reporting Person Form filed by More than One Reporting Person | | | |
| (City) | (S | tate) | (Zip) | | | | | | | | | | | | | | | |
| | | Ta | ble I - Non | 1-Deri | vativ | /e Se | curities | Acq | uired, | Disp | osed of | , or Be | neficia | ly Owned | | | | |
| 1. Title of Security (Instr. 3) 2. Trans Date (Month/I | | | | action 2A. Deemed Execution Date, if any (Month/Day/Year) | | 3. Transaction Code (Instr. 8) 4. Securities Acquired (A Disposed Of (D) (Instr. 3, 8) | | | Securiti Benefic | ecurities eneficially wned Following | | : Direct r Indirect str. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) | | | | | |
| | | | | | | | | | Code | v | Amount | (A) oi (D) | Price | Transac (Instr. 3 | tion(s) | | | (11150.4) |
| Common Stock 03/16 | | | | 6/201 | 5/2012 | | P | | 10,000 A ⁽¹⁾ | | \$1 | . 10 | 10,000 | | D | | | |
| | | | Table II - I | | | | urities A ls, warra | | | | | | | Owned | | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | | 4. Transaction Code (Instr. 8) | | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | е | 7. Title and Amo of Securities Underlying Derivative Secu (Instr. 3 and 4) | | Derivative Security | 9. Number of derivative Securities Beneficially Owned Following Reported | e s ully g | Ownership Form: Direct (D) or Indirect (I) (Instr. 4 | Beneficial Ownership (Instr. 4) |
| | | | | С | Code | v | (A) | (D) | Date Exercisa | | Expiration Date | Title | Amoun or Numbe of Shares | | Transaction(s) (Instr. 4) | | | |
| Warrants (Right to Buy) | \$1 | 03/16/2012 | | | P | | 10,000 ⁽¹⁾ | | 03/16/20 | 12 | 03/16/2017 | Common Stock | 10,00 | 0 \$1 | 10,00 | 00 | D | |

Explanation of Responses:

1. The original Form 4 Report filed on March 20, 2012 incorrectly reflected the securities as disposed rather than being acquired.

/s/ Barry D. Michaels

06/05/2012

** 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 4 (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.