

OvaScience, Inc.
 Form 4
 December 26, 2013

FORM 4 UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

OMB APPROVAL

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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).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 Dipp Michelle

(Last) (First) (Middle)
 C/O OVASCIENCE, INC., 215
 FIRST STREET,, SUITE 240
 (Street)

CAMBRIDGE, MA 02142

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol
 OvaScience, Inc. [OVAS]

3. Date of Earliest Transaction (Month/Day/Year)
 12/23/2013

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director 10% Owner
 Officer (give title below) Other (specify below)
 President and CEO

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership (Instr. 4)
				(A) or (D) Code V Amount (D) Price			
Common Stock	12/23/2013		P ⁽¹⁾	300 A \$9.1	814,557 ⁽²⁾	D	
Common Stock					3,720,571	I	By Longwood Fund, LP ⁽³⁾

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)

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)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Nu
				Code	V (A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Dipp Michelle C/O OVASCIENCE, INC., 215 FIRST STREET, SUITE 240 CAMBRIDGE, MA 02142	X	X	President and CEO	

Signatures

/s/ William C. Hicks,
Attorney-in-fact
12/26/2013

__Signature of Reporting Person

Date

Explanation of Responses:

- * 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).
- (1) The purchase reported on this Form 4 was effected pursuant to a Rule 10b5-1 trading plan.
- (2) Represents 702,627 shares of common stock and 111,930 RSUs.

Longwood Fund GP, LLC is the general partner of Longwood Fund, L.P. Voting and investment power with respect to the shares held by Longwood Fund, LP are vested in Richard Aldrich, Michelle Dipp, M.D., Ph.D. and Christoph Westphal, M.D., Ph.D. (collectively, the (3) "Managers"), the managers of Longwood Fund GP, LLC. Each of the Managers disclaims beneficial ownership of the shares held by Longwood Fund, L.P., except to the extent of their respective pecuniary interest therein, and the inclusion of these shares in the report shall not be deemed an admission of beneficial ownership of the shares for the purposes of Section 16 or for any other purpose.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.