

Vaishnaw Akshay
Form 4
September 12, 2012

FORM 4

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

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

OMB APPROVAL

OMB
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(Print or Type Responses)

1. Name and Address of Reporting Person *
Vaishnaw Akshay

(Last) (First) (Middle)

300 THIRD STREET

(Street)

CAMBRIDGE, MA 02139

(City) (State) (Zip)

2. Issuer Name **and** Ticker or Trading
Symbol
ALNYLAM
PHARMACEUTICALS, INC.
[ALNY]

3. Date of Earliest Transaction
(Month/Day/Year)
09/10/2012

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

5. Relationship of Reporting Person(s) to
Issuer

(Check all applicable)

____ Director ____ 10% Owner
____X____ Officer (give title below) ____ Other (specify below)

EVP, Chief Medical Officer

6. Individual or Joint/Group Filing(Check
Applicable Line)
____X____ 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. 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 Indirect Beneficial Ownership (Instr. 4)
Common Stock	09/10/2012		M ⁽¹⁾	1,334 A	\$ 9.3 13,922	D	
Common Stock	09/10/2012		S ⁽¹⁾	1,334 D	\$ 19 12,588	D	
Common Stock	09/12/2012		M ⁽¹⁾	4,916 A	\$ 9.3 17,504	D	
Common Stock	09/12/2012		S ⁽¹⁾	4,916 D	\$ 19 12,588	D	
Common Stock					2,395	I	By Managed

Account ⁽²⁾

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

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(9-02)

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. Amount or Number of Shares
Stock Option (Right to Buy)	\$ 9.3	09/10/2012		M ⁽¹⁾	1,334	⁽³⁾ 06/09/2021	Common Stock	1,334
Stock Option (Right to Buy)	\$ 9.3	09/12/2012		M ⁽¹⁾	4,916	⁽³⁾ 06/09/2021	Common Stock	4,916

Reporting Owners

Reporting Owner Name / Address	Relationships
	Director 10% Owner Officer Other
Vaishnaw Akshay 300 THIRD STREET CAMBRIDGE, MA 02139	EVP, Chief Medical Officer

Signatures

/s/ Michael P. Mason For: Akshay K.
Vaishnaw

09/12/2012

**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 sales reported on this Form 4 were made pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on March 20, 2012.
- (2) The reporting person owns 2,395 shares of ALNY common stock under the ALNY 401(k) plan as a result of the ALNY 401(k) matching contribution program.
- (3) The stock option vests as to 25% of the shares on the 1st anniversary of the date of the stock option grant and as to an additional 6.25% of the shares each successive three month period thereafter.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

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