

Allen Patricia L
 Form 4
 April 24, 2009

FORM 4

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

OMB APPROVAL

OMB Number: 3235-0287
 Expires: January 31, 2005
 Estimated average burden hours per response... 0.5

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 *
 Allen Patricia L

(Last) (First) (Middle)

7 ASHFORD LANE

(Street)

ANDOVER, MA 01810

(City) (State) (Zip)

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

3. Date of Earliest Transaction (Month/Day/Year)
 04/22/2009

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)
 VP of Finance/Treasurer

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 Indirect Ownership (Instr. 4)
			Code	V Amount (A) or (D) Price			
Common Stock	04/22/2009		M ⁽¹⁾	25,000 A \$ 0.95	25,000	D	
Common Stock	04/22/2009		S ⁽²⁾	25,000 D \$ 17.6298	0	D	
Common Stock					653	I	by Managed Account ⁽³⁾

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

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 control number.

SEC 1474
(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 Security (Instr. 3 and 4)	8. Amount or Number of Shares
Non-Qualified Stock Option	\$ 0.95	04/22/2009		M ⁽¹⁾	25,000	⁽⁴⁾ 05/04/2014	Common Stock	25,000

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Allen Patricia L 7 ASHFORD LANE ANDOVER, MA 01810			VP of Finance/Treasurer	

Signatures

Patricia L. Allen 04/24/2009
 **Signature of Date
 Reporting Person

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) This exercise is pursuant to a 10b5-1 plan put in place by the reporting person on March 13, 2009.
- (2) All sales reported on this Form 4 were made pursuant to a 10b5-1 trading plan adopted by the reporting person on March 13, 2009.
- (3) The reporting person owns 653 shares of ALNY common stock under the ALNY 401(k) plan as a result of the ALNY 401(k) matching contribution program.
- (4) The stock option vests as to 25% of the shares on the first anniversary of the grant and as to 6.25% of the shares on the last day of each calendar quarter thereafter.

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.