

Allen Patricia L  
 Form 4  
 April 24, 2009

**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 \*  
 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 <sup>(1)</sup>	25,000 A \$ 0.95	25,000	D	
Common Stock	04/22/2009		S <sup>(2)</sup>	25,000 D \$ 17.6298	0	D	
Common Stock					653	I	by Managed Account <sup>(3)</sup>

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 Security (Instr. 3 and 4)	Amount or Number of Shares
Non-Qualified Stock Option	\$ 0.95	04/22/2009		M <sup>(1)</sup>	25,000	<sup>(4)</sup> 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.