SATO VICKI L Form 4 June 12, 2009

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.

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

See Instruction 1(b).

(Print or Type Responses)

1. Name and Address of Reporting Person *

SATO VICKI L

2. Issuer Name and Ticker or Trading

Symbol

ALNYLAM

PHARMACEUTICALS, INC.

[ALNY]

(Last) (First) (Middle)

3. Date of Earliest Transaction

(Month/Day/Year) 06/11/2009

300 THIRD STREET

(Street) 4. If Amendment, Date Original

Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check

5. Relationship of Reporting Person(s) to

(Check all applicable)

10% Owner

Other (specify

Applicable Line)

X_ Director

Officer (give title

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

Issuer

below)

CAMBRIDGE, MA 02142

Security

(Instr. 3)

(Zip) (State) (City) 1.Title of 2. Transaction Date 2A. Deemed

(Month/Day/Year) Execution Date, if

(Month/Day/Year)

4. Securities TransactionAcquired (A) or Disposed of (D) Code (Instr. 8) (Instr. 3, 4 and 5) 5. Amount of Securities Beneficially Owned Following

6. Ownership 7. Nature of Form: Direct Indirect (D) or Indirect Beneficial Ownership (Instr. 4) (Instr. 4)

OMB APPROVAL

3235-0287

January 31,

2005

0.5

OMB

Number:

Expires:

response...

Estimated average

burden hours per

Reported Transaction(s) (Instr. 3 and 4)

Code V Amount (D) Price

(A)

or

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 2 3. Transaction Date 3A. Deemed 5. Number of 6. Date Exercisable and Derivative Conversion (Month/Day/Year) Execution Date, if TransactionDerivative **Expiration Date**

7. Title and Amor

Underlying Secur

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Security (Instr. 3)	or Exercise Price of Derivative Security		any (Month/Day/Year)	Code (Instr. 8)	Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	`	Month/Day/Year)		4)
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	Am or Num of S
Non-Qualified Stock Option (right to buy)	\$ 22.09	06/11/2009		A	15,000	06/11/2010	06/11/2019	Common Stock	15

Reporting Owners

Reporting Owner Name / Address	Relationships					
	Director	10% Owner	Officer	Other		

SATO VICKI L 300 THIRD STREET X CAMBRIDGE, MA 02142

Signatures

By: /s/ Patricia L Allen, Attorney-in-Fact For: Vicki L
Sato

06/12/2009

**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).

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.

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