

ALNYLAM PHARMACEUTICALS, INC.

Form 4

February 27, 2006

FORM 4

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

OMB APPROVAL

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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 *
Barrett Peter

(Last) (First) (Middle)

890 WINTER STREET, C/O
ATLAS VENTURE SUITE 320

(Street)

WALTHAM, MA 02451

(City) (State) (Zip)

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

3. Date of Earliest Transaction
(Month/Day/Year)
02/23/2006

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)

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 Beneficial Ownership (Instr. 4)			
			Code	V	Amount	(A) or (D)	Price			
Common Stock	02/23/2006		S		9,960	D	\$ 15.1416	0	I	See Footnote (1)
Common Stock	02/24/2006		S		18,971	D	\$ 14.797	393,956	I	See Footnote (1)
Common Stock	02/23/2006		S		2,474	D	\$ 15.1416	0	I	See Footnote (2)

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Common Stock	02/24/2006	S	4,713	D	\$ 14.797	97,871	I	See Footnote (2)
Common Stock	02/23/2006	S	166	D	\$ 15.1416	0	I	See Footnote (3)
Common Stock	02/24/2006	S	316	D	\$ 14.797	6,557	I	See Footnote (3)
Common Stock	02/23/2006	S	18,081	D	\$ 15.1416	0	I	See Footnote (4)
Common Stock	02/24/2006	S	34,439	D	\$ 14.797	715,171	I	See Footnote (4)
Common Stock	02/23/2006	S	488	D	\$ 15.1416	0	I	See Footnote (5)
Common Stock	02/24/2006	S	930	D	\$ 14.797	19,314	I	See Footnote (5)
Common Stock	02/23/2006	S	331	D	\$ 15.1416	0	I	See Footnote (6)
Common Stock	02/24/2006	S	631	D	\$ 14.797	13,095	I	See Footnote (6)

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. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Beneficially Owned Following Reported Transaction (Instr. 3 and 4)
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	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Code V (A) (D)				

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Barrett Peter 890 WINTER STREET C/O ATLAS VENTURE SUITE 320 WALTHAM, MA 02451	X			

Signatures

/s/ Jeanne Larkin Henry - Attorney in Fact	02/27/2006
<small>__Signature of Reporting Person</small>	<small>Date</small>

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).

Sale of shares of the Issuer's Common Stock by Atlas Venture Fund V, L.P. ("Atlas V"). These shares are owned directly by Atlas V.

(1) Peter Barrett is a Senior Partner of Atlas Venture. Mr. Barrett disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

Sale of shares of the Issuer's Common Stock by Atlas Venture Parallel Fund V-A, C.V. ("Atlas V-A"). These shares are owned directly

(2) by Atlas V-A. Peter Barrett is a Senior Partner of Atlas Venture. Mr. Barrett disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

Sale of shares of the Issuer's Common Stock by Atlas Venture Entrepreneurs' Fund V, L.P. ("AVE V"). These shares are owned directly

(3) by AVE V. Peter Barrett is a Senior Partner of Atlas Venture. Mr. Barrett disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

Sale of shares of the Issuer's Common Stock by Atlas Venture Fund VI, L.P. ("Atlas VI"). These shares are owned directly by Atlas VI.

(4) Peter Barrett is a Senior Partner of Atlas Venture. Mr. Barrett disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

Sale of shares of the Issuer's Common Stock by Atlas Venture Entrepreneurs' Fund VI, L.P. ("AVE VI"). These shares are owned directly

(5) by AVE VI. Peter Barrett is a Senior Partner of Atlas Venture. Mr. Barrett disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

Sale of shares of the Issuer's Common Stock by Atlas Venture Fund VI GmbH & Co. KG ("AV VI KG"). These shares are owned

(6) directly by AV VI KG. Peter Barrett is a Senior Partner of Atlas Venture. Mr. Barrett disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

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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