#### ALNYLAM PHARMACEUTICALS, INC.

Form 4

February 23, 2012

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

**OMB** Number:

3235-0287

0.5

if no longer subject to Section 16.

Check this box

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF **SECURITIES** 

January 31, Expires: 2005

**OMB APPROVAL** 

Estimated average burden hours per response...

Form 4 or Form 5 obligations may continue. See Instruction

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

1(b).

(Print or Type Responses)

1. Name and A	rting Person *	2. Issuer Name <b>and</b> Ticker or Trading Symbol			5. Relationship of Reporting Person(s) to Issuer					
			ALNYLAM PHARMACEUTICALS, INC.			(Check all applicable)				
			[ALNY]			_X_ Director	10%			
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year)			Officer (give below)	title Oth below)	eOther (specify below)		
300 THIRD ST			02/21/2012							
(Street)			4. If Amendment, Date Original			6. Individual or Joint/Group Filing(Check				
		Filed(Month/Day/Year)			Applicable Line) _X_ Form filed by One Reporting Person					
CAMBRID	42				Form filed by More than One Reporting Person					
(City)	(State)	(Zip)	Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned							
1.Title of		Date 2A. Dee		3. T	4. Securities Acquired	5. Amount of	6.	7. Nature of		
Security	(Month/Day/Y	ear) Execution	n Date, ii	1 ransacti	on(A) or Disposed of (D)	Securities	Ownership	Indirect		

(Instr. 3) Code (Instr. 3, 4 and 5) Beneficially Form: Direct Beneficial (Month/Day/Year) (Instr. 8) Owned (D) or Ownership Following Indirect (I) (Instr. 4) Reported (Instr. 4) (A) Transaction(s) or (Instr. 3 and 4) Code V Amount (D) Price

Common  $P^{(1)}$ 02/21/2012 93,023 252,111 D Stock 10.75

Common I 62,385 by Trust Stock

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

Persons who respond to the collection of SEC 1474 information contained in this form are not (9-02)required to respond unless the form displays a currently valid OMB control number.

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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	4.	5.	6. Date Exerc	cisable and	7. Title	and	8. Price of	9. Nu
Derivative	Conversion	(Month/Day/Year)	Execution Date, if	Transactio	orNumber	Expiration D	ate	Amount	t of	Derivative	Deriv
Security	or Exercise		any	Code	of	(Month/Day/	Year)	Underly	ing	Security	Secui
(Instr. 3)	Price of		(Month/Day/Year)	(Instr. 8)	Derivative	e		Securitie	es	(Instr. 5)	Bene
	Derivative				Securities			(Instr. 3	and 4)		Own
	Security				Acquired						Follo
	•				(A) or						Repo
					Disposed						Trans
					of (D)						(Instr
					(Instr. 3,						
					4, and 5)						
								^	mount		
									mount		
						Date			or Number		
						Exercisable		Title Numb			
				C + V	(A) (D)						
				Code V	(A) (D)			S	hares		

# **Reporting Owners**

Relationships Reporting Owner Name / Address 10% Owner Officer Other Director **SCHIMMEL PAUL** X

300 THIRD ST CAMBRIDGE, MA 02142

### **Signatures**

/s/ Michael P. Mason, Attorney-in-Fact for Paul R. 02/23/2012 Schimmel

> \*\*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).
- The purchase reported on this Form 4 was made by the reporting person in connection with the Company's Public Offering of Common **(1)** Stock.

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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