

ALNYLAM PHARMACEUTICALS, INC.

Form 4

September 24, 2012

FORM 4

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

OMB APPROVAL

OMB Number: 3235-0287
Expires: January 31, 2015
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 *
NOVARTIS AG

(Last) (First) (Middle)

LICHTSTRASSE 35

(Street)

BASEL SWITZERLAND, V8 CH
4002

(City) (State) (Zip)

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

3. Date of Earliest Transaction
(Month/Day/Year)
09/20/2012

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

___ Director ___X___ 10% Owner
___ Officer (give title below) ___ Other (specify below)

6. Individual or Joint/Group Filing(Check Applicable Line)

___ Form filed by One Reporting Person
X 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 | 09/20/2012 | | S | | 1,551,896 | D | \$ 19.42 |
| | | | | | 4,051,002 | I | |

See footnote (1)

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

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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 Securities (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of Derivative Securities Owned Beneficially (Instr. 5) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|--|
| | | | | Code | V (A) (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|--|---------------|-----------|---------|-------|
| | Director | 10% Owner | Officer | Other |
| NOVARTIS AG LICHTSTRASSE 35 BASEL SWITZERLAND, V8 CH 4002 | | X | | |
| NOVARTIS PHARMA AG LICHTSTRASSE 35 BASEL SWITZERLAND, V8 CH 4002 | | X | | |

Signatures

/s/ Jonathan Symonds 09/24/2012

**Signature of Reporting Person Date

/s/ Andreas Bohrer 09/24/2012

**Signature of Reporting Person Date

/s/ Simone Pfirter 09/24/2012

**Signature of Reporting Person Date

/s/ Andreas Meier 09/24/2012

**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).
- (1) These securities are owned directly by Novartis Pharma AG, a direct, wholly-owned subsidiary of Novartis AG. Novartis AG is an indirect beneficial owner of these securities.

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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