

ALNYLAM PHARMACEUTICALS, INC.

Reported by
SHARP PHILIP A

FORM 4

(Statement of Changes in Beneficial Ownership)

Filed 02/03/17 for the Period Ending 02/01/17

| | |
|-------------|---|
| Address | 300 THIRD STREET CAMBRIDGE, MA 02142 |
| Telephone | (617) 551-8200 |
| CIK | 0001178670 |
| Symbol | ALNY |
| SIC Code | 2834 - Pharmaceutical Preparations |
| Industry | Biotechnology & Medical Research |
| Sector | Healthcare |
| Fiscal Year | 12/31 |

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 or
Section 30(h) of the Investment Company Act of 1940

| | | | | | |
|--|--|---|--|--|--|
| 1. Name and Address of Reporting Person -* | | 2. Issuer Name and Ticker or Trading Symbol | | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) | |
| SHARP PHILIP A | | ALNYLAM PHARMACEUTICALS, INC. [ALNY] | | <input checked="" type="checkbox"/> Director <input type="checkbox"/> 10% Owner | |
| (Last) (First) (Middle) | | 3. Date of Earliest Transaction (MM/DD/YYYY) | | <input type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) | |
| 300 THIRD STREET | | 2/1/2017 | | | |
| (Street) | | 4. If Amendment, Date Original Filed (MM/DD/YYYY) | | 6. Individual or Joint/Group Filing (Check Applicable Line) | |
| CAMBRIDGE, MA 02142 | | | | <input checked="" type="checkbox"/> Form filed by One Reporting Person | |
| (City) (State) (Zip) | | | | <input type="checkbox"/> 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. Trans. Date | 2A. Deemed Execution Date, if any | 3. Trans. 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 | 2/1/2017 | | M | (1) | 25000 | A | \$31.29 | 165795 | D | |
| Common Stock | 2/1/2017 | | S | (1) | 20171 | D | \$39.72 (2) | 145624 | D | |
| Common Stock | 2/1/2017 | | S | (1) | 4829 | D | \$40.16 (3) | 140795 | D | |
| Common Stock | | | | | | | | 126104 | I | by Trust (4) |

Table II - Derivative Securities Beneficially Owned (e.g. , puts, calls, warrants, options, convertible securities)

| 1. Title of Derivate Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Trans. Date | 3A. Deemed Execution Date, if any | 4. Trans. 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 | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|-------------------|---|------------------------------|-----|--|--|------------|--|--------------------|---|--|---|--|
| | | | | Code | V | | (A) | (D) | Date Exercisable | Expiration Date | | | | |
| Stock Option (right to buy) | \$31.29 | 2/1/2017 | | M | (1) | 25000 | 12/12/2008 | 12/13/2017 | Common Stock | 25000 | \$0.0 | 0 | D | |

Explanation of Responses:

- 1) The sales reported on this Form 4 were made pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on August 25, 2016.
- 2) Sale prices ranged from \$39.09 to \$40.08
- 3) Sale prices ranged from \$40.10 to \$40.24
- 4) The 126,104 shares reported as indirectly owned by trust include: (i) 94,838 shares in the Phillip A. Sharp 2009 Grantor Annuity Trust No. 3, and (ii) 31,266 shares in the Phillip A. Sharp 2008 Grantor Annuity Trust No. 2 (which include shares distributed from the 2010 Trust).

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---------------|-----------|---------|-------|
| | Director | 10% Owner | Officer | Other |
| SHARP PHILIP A 300 THIRD STREET CAMBRIDGE, MA 02142 | X | | | |

Signatures

By: /s/ Michael P. Mason, Attorney-in-Fact For: Phillip A. Sharp

2/3/2017

** Signature of Reporting Person

Date

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

* 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.

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