

FORM 4

☐ Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

☒ Check this box to indicate that a transaction was made pursuant to a contract, instruction or written plan that is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c). See Instruction 10.

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

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

OMB APPROVAL
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1. Name and Address of Reporting Person * PYOTT DAVID E I (Last) (First) (Middle) 675 WEST KENDALL STREET (Street) CAMBRIDGE MASSACHUSETTS 02142 (City) (State) (Zip/Postal Code) UNITED STATES (Country)	2. Issuer Name and Ticker or Trading Symbol ALNYLAM PHARMACEUTICALS, INC. [ALNY]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) ☒ Director ☐ 10% Owner ☐ Officer (give title below) ☐ Other (specify below)
3. Date of Earliest Transaction (MM/DD/YYYY) 6/1/2026		6. Individual or Joint/Group Filing (Check Applicable Line) ☒ Form filed by One Reporting Person ☐ Form filed by More than One Reporting Person
4. If Amendment, Date Original Filed (MM/DD/YYYY)		

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	6/1/2026		M ⁽¹⁾		3,830	A	\$0	5,412	D	
Common Stock	6/1/2026		S ⁽¹⁾		921	D	\$297.71 ⁽²⁾	4,491	D	
Common Stock	6/1/2026		S ⁽¹⁾		1,175	D	\$298.91 ⁽³⁾	3,316	D	
Common Stock	6/1/2026		S ⁽¹⁾		1,222	D	\$299.87 ⁽⁴⁾	2,094	D	
Common Stock	6/1/2026		S ⁽¹⁾		495	D	\$300.72 ⁽⁵⁾	1,599	D	
Common Stock	6/1/2026		S ⁽¹⁾		17	D	\$302.65	1,582	D	
Common Stock								27,900	I	by Trust ⁽⁶⁾

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	Title	Amount or Number of Shares				
Stock Option (Right to Buy)	\$70.2	6/1/2026		M ⁽¹⁾			3,830	6/3/2017 ⁽⁷⁾	6/3/2026	Common Stock	3,830	\$0	0	D	

Explanation of Responses:

- (1) The transactions reported on this Form 4 were made pursuant to a Rule 10b5-1(c) trading plan adopted by the reporting person on November 12, 2025. The options exercised by the reporting person were due to expire on June 3, 2026.
- (2) The price reported represents the weighted average sales price of shares sold in multiple transactions at prices ranging from \$297.31 to \$297.99. The reporting person will provide to the issuer, any security holder of the issuer or the SEC staff, upon request, information regarding the number of shares sold at each price within the range.
- (3) The price reported represents the weighted average sales price of shares sold in multiple transactions at prices ranging from \$298.33 to \$299.33. The

reporting person will provide to the issuer, any security holder of the issuer or the SEC staff, upon request, information regarding the number of shares sold at each price within the range.

- (4) The price reported represents the weighted average sales price of shares sold in multiple transactions at prices ranging from \$299.36 to \$300.19. The reporting person will provide to the issuer, any security holder of the issuer or the SEC staff, upon request, information regarding the number of shares sold at each price within the range.
- (5) The price reported represents the weighted average sales price of shares sold in multiple transactions at prices ranging from \$300.45 to \$301.15. The reporting person will provide to the issuer, any security holder of the issuer or the SEC staff, upon request, information regarding the number of shares sold at each price within the range.
- (6) The shares of ALNY common stock were purchased by the David E I Pyott Trust, of which the reporting person is trustee.
- (7) This stock option was fully vested and exercisable as of June 3, 2017.

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
PYOTT DAVID E I 675 WEST KENDALL STREET CAMBRIDGE MASSACHUSETTS 02142 UNITED STATES	X			

Signatures

Brett Budzinski, Attorney-in-Fact For: David E.I. Pyott

6/3/2026

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.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

* Form 4: SEC 1474 (03-26).