FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

**OMB APPROVAL** OMB Number: 3235-0287 Estimated average burden hours per response: 0.5

D

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

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* Fitzgerald Kevin Joseph						2. Issuer Name and Ticker or Trading Symbol ALNYLAM PHARMACEUTICALS, INC. [ ALNY ]								5. Relationship of Reporting (Check all applicable) Director Officer (give title				Person(s) to Issuer  10% Owner Other (spec		
(Last) (First) (Middle) 675 WEST KENDALL STREET					3. Date of Earliest Transaction (Month/Day/Year) 08/12/2024									<b>V</b>				below)		
HENRI A. TERMEER SQUARE					4.	4. If Amendment, Date of Original Filed (Month/Day/Year)								6. Individual or Joint/Group Filing (Check Applicable Line)						
(Street) CAMBRIDGE MA 02142					Form filed by One Reporting Person Form filed by More than One Reporting Person															
(City) (State) (Zip)					R	Rule 10b5-1(c) Transaction Indication														
					V	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.														
		Tak	ole I - N	lon-Deri	vativ	e Se	curit	ties A	cquire	ed, D	isposed c	f, or Be	eneficia	ally	Owned					
Date							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 ar			5. Amount of Securities Beneficially Owned Following Reported		s Ily ollowing	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		Transacti (Instr. 3 a	on(s)			(IIIStr. 4)	
Common Stock 08/12/					2024				M <sup>(1)</sup>		6,667	A	\$97.7	7.72 20,848		848		D		
Common Stock 08/12/					2024	024			M <sup>(1)</sup>		14,058	A	\$85	34,906		906		D		
Common Stock 08/1					2024				<b>S</b> <sup>(1)</sup>		1,421	D	\$268.60	33,485			D			
Common Stock 08/12/				2024				S <sup>(1)</sup>		9,662	D	\$270.17	23,823			D				
Common Stock 08/1				08/12/2	2/2024				<b>S</b> <sup>(1)</sup>		5,736	D	\$271.32	.32 <sup>(4)</sup> 18,087			D			
Common Stock 08/12/2					2024				S <sup>(1)</sup>		3,913	D	\$272.43	<b>3</b> (5)	14,	14,174		D		
Common Stock 08/12/20				2024	)24			S <sup>(1)</sup>		1,158	D	\$273.73 <sup>(6)</sup>		13,016			D			
Common Stock 08/12/20				2024	24			S <sup>(1)</sup>		135	D	\$274.6	12,881		881		D			
Common Stock														537		I		by Managed Account <sup>(7)</sup>		
			Table I								posed of , converti				wned		,			
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)				Expira	e Exer ation D h/Day/		of Secur Underlyi	ing ve Security	Dei Sed	erivative ecurity nstr. 5)	9. Numb derivativ Securitie Beneficia Owned Followin Reported Transact (Instr. 4)	Owne Form: Direct or Ind (I) (Ins	10. Ownershi Form: Direct (D) or Indirec (I) (Instr. 4	Beneficial Ownership t (Instr. 4)	
					Code	v	/ (A)	(D)	Date Exercisable		Expiration Date	Title	Amoun or Numbe of Shares	r						
Stock Option (right to buy)	\$85	08/12/2024			M <sup>(1)</sup>			14,058	(8	8)	02/28/2029	Common Stock	14,05	8	\$0.0	2,19	2	D		
Stools																				

## **Explanation of Responses:**

\$97.72

Option

(right to

1. All transactions reported on this Form 4 were made pursuant to a Rule 10b5-1(c) trading plan adopted by the reporting person on May 10, 2024.

 $M^{(1)}$ 

2. The price reported represents the weighted average sales price of shares sold in multiple transactions at prices ranging from \$268.53 to \$269.52. 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.

6,667

12/07/2025

6,667

\$<mark>0.0</mark>

- 3. The price reported represents the weighted average sales price of shares sold in multiple transactions at prices ranging from \$269.90 to \$270.87. 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 \$271.02 to \$271.99. 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.
- 5. The price reported represents the weighted average sales price of shares sold in multiple transactions at prices ranging from \$272.23 to \$272.99. 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.
- 6. The price reported represents the weighted average sales price of shares sold in multiple transactions at prices ranging from \$273.32 to \$274.01. 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
- 7. Reflects shares of ALNY common stock acquired by the Reporting Person under the issuer 401(k) plan as a result of the issuer 401(k) matching contribution program.
- 8. This stock option was fully vested and exercisable as of February 28, 2023.
- 9. This stock option was fully vested and exercisable as of December 7, 2015.

08/12/2024

By: Brett Budzinski, Attorney- 08/14/2024 in-Fact For: Kevin Fitzgerald

\*\* Signature of Reporting Person

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

- $^{\star}$  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 Number.