

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**

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* <u>Mason Michael</u>			2. Issuer Name and Ticker or Trading Symbol <u>ALNYLAM PHARMACEUTICALS, INC.</u> [ <u>ALNY</u> ]		5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>VP, Finance and Treasurer</u>	
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) <u>03/01/2018</u>		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person	
300 THIRD STREET			4. If Amendment, Date of Original Filed (Month/Day/Year)			
(Street)	<u>CAMBRIDGE MA</u>	<u>02142</u>				
(City)	(State)	(Zip)				

**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			

**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 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: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
						Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
<u>Stock Option (right to buy)</u>	<u>\$119.13</u>	<u>03/01/2018</u>		<u>A</u>	<u>4,000<sup>(1)</sup></u>	<u>(2)</u>	<u>02/28/2028</u>	<u>Common Stock</u>	<u>4,000</u>	<u>\$0.0</u>	<u>4,000</u>	<u>D</u>	

**Explanation of Responses:**

- Represents the time-vested portion of the reporting person's Annual Stock Option Award for 2017. The reporting person also received 4,000 options to purchase shares of ALNY common stock that will vest upon the achievement of three specific performance conditions, which will be reported on a Form 4 if and when each performance condition is met and the option vests.
- The stock option vests as to 25% of the shares on the 1st anniversary of the date of the stock option grant and as to the remaining shares ratably at the end of each three-month period thereafter over the following thirty-three (33) months

/s/ Michael P. Mason 03/05/2018

\*\* 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 Number.