

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

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> <hr/> (Last) (First) (Middle) 300 THIRD STREET <hr/> (Street) CAMBRIDGE MA 02142 <hr/> (City) (State) (Zip)			2. Issuer Name and Ticker or Trading Symbol <u>ALNYLAM PHARMACEUTICALS, INC.</u> [ALNY]			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>		
			3. Date of Earliest Transaction (Month/Day/Year) <u>08/10/2018</u>					
			4. If Amendment, Date of Original Filed (Month/Day/Year)					
			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					

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	08/13/2018		A ⁽¹⁾		1,012	A	\$0.0	1,012	D	
Common Stock	08/13/2018		F		449	D	\$90.95	563	D	
Common Stock	01/17/2018		J ⁽²⁾	V	5	A	\$0.0 ⁽²⁾	231	I	by Managed Account ⁽²⁾
Common Stock	04/16/2018		J ⁽²⁾	V	22	A	\$0.0 ⁽²⁾	253	I	by Managed Account ⁽²⁾
Common Stock	07/10/2018		J ⁽²⁾	V	23	A	\$0.0 ⁽²⁾	276	I	by Managed Account ⁽²⁾

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)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date						Title
Performance Stock Option 2013 (right to buy)	\$63	08/10/2018		A ⁽³⁾		1,666		08/10/2018	12/18/2023	Common Stock	1,666	\$0.0	1,666	D	
Performance Stock Option 2014 (right to buy)	\$96.45	08/10/2018		A ⁽⁴⁾		2,750		08/10/2018	12/17/2024	Common Stock	2,750	\$0.0	2,750	D	

Explanation of Responses:

- On January 4, 2016, the reporting person was granted a restricted stock unit (RSU) to purchase shares of ALNY common stock. The shares subject to release vest upon the commercial launch of Alnylams first internally developed product, as approved by our compensation committee. Effective August 13, 2018, the compensation committee of the Company determined the performance criterion has been met and the RSU shares have vested.
- Reflects shares of ALNY common stock acquired by the reporting person under the ALNY 401(k) plan as a result of the ALNY 401(k) matching contribution program.

3. On December 18, 2013, the reporting person was granted a performance based stock option to purchase shares of ALNY Common Stock. One-third of the shares subject to the option will vest upon the achievement of each of three specific clinical development and regulatory events, as approved by our compensation committee. Effective August 10, 2018, the compensation committee of the Company determined the final performance criteria had been met and the option will vest as to the final third of the award.

4. On December 17, 2014, the reporting person was granted a performance based stock option to purchase shares of ALNY Common Stock. One-third of the shares subject to the option will vest upon the achievement of each of three specific clinical development and regulatory events, as approved by our compensation committee. Effective August 10, 2018, the compensation committee of the Company determined the final performance criteria had been met and the option vested as to the final third of the award.

/s/ Michael P. Mason

08/14/2018

** 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.