

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

OMB APPROVAL

OMB Number: 3235-0287

Estimated average burden hours per response: 0.5

1. Name and Address of Reporting Person * <u>SHARP PHILLIP A</u> (Last) (First) (Middle) <u>675 WEST KENDALL STREET</u> <u>HENRI A. TERMEER SQUARE</u> (Street) <u>CAMBRIDGE MA 02142</u> (City) (State) (Zip)	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) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below)
3. Date of Earliest Transaction (Month/Day/Year) <u>02/12/2020</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
4. If Amendment, Date of Original Filed (Month/Day/Year)		

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	02/12/2020		M ⁽¹⁾		15,000	A	\$15.82	250,633	D	
Common Stock	02/12/2020		M ⁽¹⁾		15,000	A	\$9.14	265,633	D	
Common Stock	02/12/2020		S ⁽¹⁾		30,000	D	\$130	235,633	D	
Common Stock								31,266	I	by Trust ⁽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		Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Non-Qualified Stock Option (right to buy)	\$9.14	02/12/2020		M ⁽¹⁾		15,000	12/08/2011	12/08/2020	Common Stock	15,000	\$0.0	0	D	
Stock Option (right to buy)	\$15.82	02/12/2020		M ⁽¹⁾		15,000	06/02/2011	06/02/2020	Common Stock	15,000	\$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 November 22, 2019.
2. Includes shares of ALNY common stock held in trusts for the benefit of the children of Dr. Sharp, of which the spouse of Dr. Sharp and children are the trustees.

By: /s/ Mary Beth DeLena,
Attorney-in-Fact For: Phillip A Sharp 02/13/2020

** 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.