

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL

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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

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

1. Name and Address of Reporting Person*			2. Issuer Name and Ticker or Trading Symbol		5. Relationship of Reporting Person(s) to Issuer (Check all applicable)	
<u>Greene Barry E</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)			<u>ALNYLAM PHARMACEUTICALS, INC.</u> <u>[ALNY]</u>		Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) <input type="checkbox"/> Other (specify below) <u>President</u>	
			3. Date of Earliest Transaction (Month/Day/Year)		6. Individual or Joint/Group Filing (Check Applicable Line)	
			<u>09/09/2020</u>		<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	07/16/2020		G ⁽¹⁾	V	3,176	A	\$0.0	65,412	D	
Common Stock	09/09/2020		M ⁽²⁾		44,530	A	\$9.14	114,873	D	
Common Stock	09/09/2020		S ⁽²⁾		14,075	D	\$122.66 ⁽³⁾	100,798	D	
Common Stock	09/09/2020		S ⁽²⁾		27,109	D	\$123.39 ⁽⁴⁾	73,689	D	
Common Stock	09/09/2020		S ⁽²⁾		3,346	D	\$124.38 ⁽⁵⁾	70,343	D	
Common Stock	07/16/2020		G ⁽¹⁾	V	155	A	\$0.0	155	I	by Dependent
Common Stock	07/16/2020		G ⁽¹⁾	V	155	D	\$0.0	3,331	I	by Trust
Common Stock	07/16/2020		G ⁽¹⁾	V	155	D	\$0.0	3,176	I	by Trust
Common Stock	07/16/2020		G ⁽¹⁾	V	3,176	D	\$0.0	0	I	by Trust
Common Stock								3,003	I	by Managed Account ⁽⁶⁾

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					
Stock Option (right to buy)	\$9.14	09/09/2020		M ⁽²⁾		44,530	(7)	12/08/2020	Common Stock 44,530	\$0.0	0	D	

Explanation of Responses:

- Represents shares of ALNY common stock distributed upon termination of the Barry E. Greene Qualified Annuity Interest Trust (GRAT), of which the reporting person is the sole Trustee. Upon termination of the trust on July 16, 2020, 155 of the shares held by the GRAT were gifted to a non-dependent child, and 155 of the shares were transferred to the reporting persons dependent child. The remaining 3,176 shares were distributed to the reporting person.
- All sales reported on this Form 4 were made pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on February 13, 2020. The 44,530 options exercised and sold by the reporting person were due to expire on December 8, 2020.
- Sale prices ranged from \$122.00 to \$123.00.
- Sale prices ranged from \$123.01 to \$124.00.
- Sale prices ranged from \$124.03 to \$124.87.
- 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.
- The stock option vested as to 25% of the shares on the 1st anniversary of the date of the stock option grant and as to an additional 6.25% of the shares each successive three month period thereafter.

By: /s/ Mary Beth DeLena,
Attorney-in-Fact For: Barry E. Greene 09/11/2020

** 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.

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