

Regulus Therapeutics Inc.  
Form SC 13G/A  
February 13, 2017

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**

**SCHEDULE 13G**  
**UNDER THE SECURITIES EXCHANGE ACT OF 1934**  
**(Amendment No. 2)\***

**Regulus Therapeutics Inc.**  
**(Name of Issuer)**

**COMMON STOCK, \$0.001 PAR VALUE PER SHARE**  
**(Title of Class of Securities)**

**75915K101**  
**(CUSIP Number)**

**December 31, 2016**  
**(Date of Event Which Requires Filing of this Statement)**

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be filed for the purpose of Section 18 of the Securities Exchange Act of 1934 ( Act ) or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No. 75915K101

1. NAMES OF REPORTING PERSONS

Alnylam Pharmaceuticals, Inc.

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a) (b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

5. SOLE VOTING POWER

NUMBER OF

SHARES 3,998,621  
6. SHARED VOTING POWER

BENEFICIALLY

OWNED BY 0  
EACH 7. SOLE DISPOSITIVE POWER

REPORTING

PERSON 3,998,621  
8. SHARED DISPOSITIVE POWER

WITH

0

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,998,621

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

7.6%<sup>(1)</sup>

12. TYPE OF REPORTING PERSON

CO

- (1) The percentage is calculated based on 52,923,305 shares of the Issuer's common stock outstanding as of October 28, 2016, as disclosed by the Issuer in its Quarterly Report on Form 10-Q for the quarter ended September 30, 2016, filed with the SEC on November 2, 2016.

Page 2 of 5 pages

CUSIP No. 75915K101

**Item 1. Issuer**

- (a) Name of Issuer:  
Regulus Therapeutics Inc. (the **Issuer** )
- (b) Address of Issuer's Principal Executive Offices:  
10614 Science Center Dr.  
  
San Diego, CA 92121

**Item 2. Filing Person**

- (a) (c) Name of Person Filing; Address; Citizenship:  
Alnylam Pharmaceuticals, Inc., a Delaware corporation

The address of the principal business office of the reporting person is 300 Third Street, 3<sup>rd</sup> Floor, Cambridge, MA 02142.

- (d) Title of Class of Securities:  
Common stock, \$0.001 par value per share
- (e) CUSIP Number:

75915K101

**Item 3. Description of Person Filing**

Not applicable.

CUSIP No. 75915K101

**Item 4. Ownership.**

(a) and (b) Amount beneficially owned; percent of class:

The reporting person directly owns 3,998,621 shares, which represents approximately 7.6%<sup>(1)</sup> of the outstanding shares of common stock.

(c) Number of shares as to which such person has:

(i) Sole power to vote or direct the vote

3,998,621 shares

(ii) Shared power to vote or to direct the vote

0 shares

(iii) Sole power to dispose or to direct the disposition of

3,998,621 shares

(iv) Shared power to dispose or to direct the disposition of

0 shares

**Item 5. Ownership of Five Percent or Less of a Class.**

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following

**Item 6. Ownership of More than Five Percent on Behalf of Another Person.**

Not applicable.

**Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.**

Not applicable.

**Item 8. Identification and Classification of Members of the Group.**

Not applicable.

**Item 9. Notice of Dissolution of Group.**

Not applicable.

**Item 10. Certification.**

Not applicable.

- (1) The percentage is calculated based on 52,923,305 shares of the Issuer's common stock outstanding as of October 28, 2016, as disclosed by the Issuer in its Quarterly Report on Form 10-Q for the quarter ended September 30, 2016, filed with the SEC on November 2, 2016.

**SIGNATURE**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 13, 2017

ALNYLAM PHARMACEUTICALS, INC.

By: /s/ Michael P. Mason  
Michael P. Mason  
Vice President, Finance and  
Treasurer

Page 5 of 5 pages