

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 | |
|--|-----------|
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| | | |
|---|--|---|
| 1. Name and Address of Reporting Person* <u>ISIS PHARMACEUTICALS INC</u> (Last) (First) (Middle) 2855 GAZELLE COURT (Street) CARLSBAD CA 92010 (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>Regulus Therapeutics Inc. ["RGLS"]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below) |
| | 3. Date of Earliest Transaction (Month/Day/Year) 08/13/2014 | |
| 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 | 08/13/2014 | | S ⁽¹⁾ | | 2,250 | D | \$7.0167 ⁽²⁾ | 6,995,600 | D ⁽³⁾ | |
| Common Stock | 08/14/2014 | | S ⁽¹⁾ | | 1,750 | D | \$7.0423 ⁽⁴⁾ | 6,993,850 | D ⁽³⁾ | |
| Common Stock | 08/15/2014 | | S ⁽¹⁾ | | 1,450 | D | \$6.9761 ⁽⁵⁾ | 6,992,400 | D ⁽³⁾ | |

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) | | 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 | | | | | |

1. Name and Address of Reporting Person*
ISIS PHARMACEUTICALS INC
 (Last) (First) (Middle)
 2855 GAZELLE COURT
 (Street)
 CARLSBAD CA 92010
 (City) (State) (Zip)

1. Name and Address of Reporting Person*
PARSHALL B LYNNE
 (Last) (First) (Middle)
 C/O ISIS PHARMACEUTICALS, INC.
 2855 GAZELLE COURT
 (Street)
 CARLSBAD CA 92010
 (City) (State) (Zip)

Explanation of Responses:

- The sales reported in the Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on May 22, 2014.
- The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$6.87 to \$7.08 inclusive. The reporting person undertakes to provide to RGLS, any security holder of RGLS, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the ranges set forth in this footnote to this Form 4.
- The shares are held directly by Isis Pharmaceuticals, Inc. Ms. Parshall is an officer and director of Isis and therefore may be deemed to have voting or investment power over the shares beneficially owned by

Isis. Ms. Parshall disclaims beneficial ownership over the shares beneficially owned by Isis, except to the extent of her proportionate pecuniary interest therein as a stockholder of Isis.

4. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$6.92 to \$7.09 inclusive. The reporting person undertakes to provide to RGLS, any security holder of RGLS, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the ranges set forth in this footnote to this Form 4.

5. The price reported in Column 4 is a weighted average price. These shares were sold in multiple transactions at prices ranging from \$6.86 to \$7.19 inclusive. The reporting person undertakes to provide to RGLS, any security holder of RGLS, or the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the ranges set forth in this footnote to this Form 4

Remarks:

/s/ Christopher Aker, Attorney-
in-Fact for all Reporting 08/15/2014
Owners

** 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.