

Regulus Therapeutics Inc.  
Form SC 13G  
October 10, 2012

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

SCHEDULE 13G

(Rule 13d-102)

Information to be Included in Statements Filed Pursuant  
to § 240.13d-1(b), (c) and (d) and Amendments Thereto Filed  
Pursuant to § 240.13d-2

Under the Securities Exchange Act of 1934  
(Amendment No. \_\_\_\_\_)\*

Regulus Therapeutics, Inc.  
(Name of Issuer)

Common Stock, Par Value \$0.001  
(Title of Class of Securities)

75915K101  
(CUSIP Number)

October 3, 2012  
(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).

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 control number.



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CUSIP No. 75915K101

1. Names of Reporting Persons.

GlaxoSmithKline plc

2. Check the Appropriate Box if a Member of a Group

(a)

(b)

3. SEC Use Only

4. Citizenship or Place of Organization

England and Wales

5. Sole Voting Power

3,303,775\*

Number of Shares  
Beneficially  
Owned by  
Each Reporting  
Person With:

6. Shared Voting Power

0

7. Sole Dispositive Power

3,303,775\*

8. Shared Dispositive Power

0

9. Aggregate Amount Beneficially Owned by Each Reporting Person

3,303,775\*

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares

11. Percent of Class Represented by Amount in Row (9)

9.3%

12. Type of Reporting Person

CO

\*Includes 1,356,738 shares of Common Stock issuable upon the conversion of \$5,426,952 of outstanding principal plus accrued interest underlying an amended and restated convertible note, which is convertible at the election of the holder, and assuming the occurrence of the conversion on October 10, 2012.

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CUSIP No. 75915K101

ITEM 1.

(a) Name of Issuer:

Regulus Therapeutics, Inc.

(b) Address of Issuer's Principal Executive Offices:

3545 John Hopkins Court, Suite 210  
San Diego, California 92121

ITEM 2.

(a) Name of Person Filing:

GlaxoSmithKline plc

(b) Address of Principal Business Office, or if None, Residence:

980 Great West Road  
Brentford  
Middlesex  
TW8 9GS ENGLAND

(c) Citizenship:

England and Wales

(d) Title of Class of Securities:

Common Stock, par value \$0.001 per share

(e) CUSIP Number:

75915K101

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO SS.240.13d-1(b) OR 240.13d-2(b) OR (c), CHECK WHETHER THE PERSON FILING IS A:

Not Applicable

ITEM 4. OWNERSHIP.

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

The information in items 1 and 5 through 11 on the cover pages (page 2) on this Schedule 13G is hereby incorporated by reference.

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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.

|                      |           |      |
|----------------------|-----------|------|
| Glaxo Group Limited* | 3,303,775 | 9.3% |
|----------------------|-----------|------|

\*Shares held directly by Glaxo Group Limited, an indirect wholly-owned subsidiary of Reporting Person.

ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY.

Not Applicable

ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP.

Not Applicable

ITEM 9. NOTICE OF DISSOLUTION OF GROUP.

Not Applicable

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ITEM 10. CERTIFICATIONS.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having such purpose or effect.

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.

October 10, 2012

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(Date)

/s/ Victoria Whyte

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(Signature)

Victoria Whyte,  
Company Secretary

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(Name/Title)

The original statement shall be signed by each person on whose behalf the statement is filed or his authorized representative. If the statement is signed on behalf of a person by his authorized representative other than an executive officer or general partner of the filing person, evidence of the representative's authority to sign on behalf of such person shall be filed with the statement, provided, however, that a power of attorney for this purpose which is already on file with the Commission may be incorporated by reference. The name and any title of each person who signs the statement shall be typed or printed beneath his signature.

