

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

March 12, 2014

Via E-mail

Kleanthis G. Xanthopoulos, Ph.D. President and Chief Executive Officer Regulus Therapeutics Inc. 3545 John Hopkins Ct., Suite 210 San Diego, CA 92121

Re: Regulus Therapeutics Inc.

Registration Statement on Form S-3

Filed March 4, 2014 File No. 333-194293

Dear Dr. Xanthopoulos:

We have limited our review of your registration statement to the issue addressed in our comment. Please respond to this letter by providing the requested disclosure. If you do not believe our comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in a response.

After reviewing any information you provide in response to this comment, we may have additional comments.

General

1. We note that you have not yet filed Part III of your annual report on Form 10-K. We will not be in a position to grant effectiveness to your registration statement until such time as you have either amended your Form 10-K to include Part III or you have incorporated it by reference from your definitive proxy statement.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

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Notwithstanding our comment, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Scot Foley at (202) 551-3383 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Daniel Greenspan for

Jeffrey P. Riedler Assistant Director

cc: Thomas A. Coll, Esq. Kenneth J. Rollins, Esq. Cooley LLP 4401 Eastgate Mall San Diego, CA 92121