

Via Facsimile and U.S. Mail

February 11, 2011

Philip R. Jacoby, Jr.
Chief Financial Officer
Osiris Therapeutics, Inc.
7015 Albert Einstein Drive
Columbia, MD 21046

**Re: Osiris Therapeutics, Inc.
Form 10-K for the fiscal year ended December 31, 2009
Filed March 12, 2010
Form 10-Q for the quarter ended September 30, 2010
Filed November 5, 2010
Definitive Proxy Statement on Schedule 14A
Filed April 16, 2010
File No. 1-32966**

Dear Mr. Jacoby:

We have reviewed your correspondence dated January 18, 2011 and we have the following additional comments.

Please respond to this letter within ten business days by providing the requested information. If you do not believe one or more of these comments apply to your facts or circumstances, please tell us why in your response. After reviewing the information you provide in response to these comments, we may have additional comments.

Item 1. Business

Collaborations, page 17

1. We note your response to prior comment 1. Although confidential treatment may have been granted to the specific royalty payment terms included in your agreement, we request that all registrants provide a range of such royalties in their periodic disclosure. We therefore re-issue that portion of our comment and again ask that you submit draft disclosure that includes this information. As noted, a relatively broad range will suffice, e.g. "single-digits," "teens," "twenties," etc., preferably with an indication of either "high" or "low."

Definitive Proxy Statement on Schedule 14A

Compensation Discussion and Analysis, page 45

2. We note your response to prior comment 7. In your disclosure, you state the following: “(t)he Compensation Committee performs annual reviews of executive compensation to confirm the competitiveness of the overall executive compensation packages as compared with companies who compete with us to attract and retain employees.” As this strongly indicates that you benchmark your compensation to some extent, we re-issue our comment and request that you provide us with draft disclosure listing the companies you were referring to when you drafted this statement.
3. We note your response to prior comment 8. While we understand that performance objectives can be fluid, both your disclosure and your response suggest to us that there were specific corporate and individual objectives that were utilized in making compensation decisions. These criteria should therefore be provided to your investors regardless of whether they were “broadly based” or if more subjective standards were the primary measures you employed. If these objectives were altered during the course of your fiscal year, then you should provide us with both the original and the revised objectives, together with disclosure explaining why you felt an adjustment needed to be made. Accordingly, we re-issue our comment.
4. We note your response to prior comment 9. Please explain in detail the process the Compensation Committee used to determine that risks stemming from your compensation practices and policies are unlikely to result in a material adverse effect.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing include the information required under the Securities Exchange Act of 1934 and all applicable Exchange 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.

You may contact Scot Foley at (202) 551-3383 or myself at (202) 551-3715 with any questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director