

Via Facsimile and U.S. Mail
Mail Stop 6010

November 10, 2008

Richard W. Hunt
Chief Financial Officer
Osiris Therapeutics, Inc.
7015 Albert Einstein Drive
Columbia, MD 21046

Re: Osiris Therapeutics, Inc.
Form 10-K for the Year Ended December 31, 2007
Form 10-Q for the Quarterly Period Ended June 30, 2008
File Number: 001-32966

Dear Mr. Hunt:

We have reviewed your filings and have the following comments. We have limited our review to your financial statements and related disclosures and do not intend to expand our review to other portions of your document. In our comments, we ask you to provide us with information to better understand your disclosure. Where a comment requests you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the annual or quarterly filing, as applicable, in which you intend to first include it. If you do not believe that revised disclosure is necessary, explain the reason in your response. After reviewing the information provided, we may raise additional comments and/or request that you amend your filing.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filings. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-Q for the Quarterly Period Ended June 30, 2008

Notes to Unaudited Condensed Financial Statements

2. Significant Accounting Policies and Recent Accounting Pronouncements
Investments Available for Sale, page 7

1. You disclose that investments available for sale consist primarily of student loan auction rate securities that are presently illiquid. Please tell us why these investments are classified as current assets.

3. Discontinued Operations & Subsequent Event, page 9

2. In light of the Manufacturing Agreement with NuVasive, Inc. in which you may record revenue of up to approximately \$52 million, please tell us how you determined that you do not have continuing involvement in the component disposed. Please see EITF Issue No. 03-13, including Exhibit 03-13A and Example 7.

* * * *

Please provide us the information requested within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your response to our comments. Detailed cover letters greatly facilitate our review. Please furnish your letter on EDGAR under the form type label CORRESP.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings include all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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.

In connection with responding to our comments, please provide, in your letter, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filings or in response to our comments on your filings.

Richard W. Hunt
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You may contact Vanessa Robertson, Staff Accountant, at (202) 551-3649 or Joel Parker, Accounting Branch Chief, at (202) 551-3651 if you have any questions regarding the comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief
Accountant