

Mail Stop 6010

October 17, 2008

James B. Murphy
Vice President and Chief Financial Officer
OXiGENE, Inc.
230 Third Avenue
Waltham, MA 02451

**Re: OXiGENE, Inc.
Schedule 14A
Filed October 10, 2008
File No. 0-21990**

Dear Mr. Murphy:

We have reviewed your filing and have the following comment. Where indicated, we think you should revise your document in response to this comment. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. After reviewing this information, we may raise additional comments.

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 filing. We look forward to working with you in these respects. We welcome any questions you may have about our comment or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Proposal 1, page 3

1. Please revise your proxy statement to disclose the aggregate number of shares that could be issued under all of the share issuance agreements. Please also include in this revised disclosure the percentage of your outstanding shares that will be held by Symphony ViDA Holdings LLC if these shares are all issued.

* * *

As appropriate, please revise your filing in response to this comment. You may wish to provide us with marked copies to expedite our review. Please furnish a cover letter with your amendment that keys your response to our comment. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your response to our comment.

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 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 comment, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; 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 filing or in response to our comments on your filing.

You may contact Jennifer Riegel at (202) 551-3575 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey Riedler
Assistant Director