

Mail Stop 6010

April 24, 2008

Richard Chin, M.D.  
President and Chief Executive Officer  
Oxigene, Inc.  
230 Third Avenue  
Waltham, MA 02451

**Re: Oxigene, Inc.**  
**Preliminary Proxy Statement on Schedule 14A**  
**Filed April 18, 2008**  
**File No. 0-21990**

Dear Dr. Chin:

This is to advise you that we have limited our review of the above referenced proxy statement to only the issues identified below.

Schedule 14A

Proposal No. 2: The Issuance of Up to 5,708,035 Shares of Our Common Stock Under the Committed Equity Financing Facility, page 7

1. Please include a brief discussion setting forth the specific uses of the proceeds from the issuance of stock to Kingsbridge.
2. We note your brief discussion regarding the dilutive effect and potential decrease in stock price that may result in connection with the issuance of stock to Kingsbridge. Please expand your discussion to include the specific dilutive effect of issuing shares as the price of your common stock decreases. Please also discuss the reasons your stock price may decrease as a result of the issuance of stock to Kingsbridge.
3. Please revise your disclosure to include a table setting forth the specific number of shares that could be issued based on the current price. The information on the table should also include the specific discounted price that Kingsbridge would pay for the shares of common stock.

Summary of the CEFF, page 8

4. It appears you are incorporating by reference to the proxy statement the purchase agreement filed as an exhibit to your Form 8-K filed on February 21, 2008. In that regard, please note that such incorporation should comply with Note D to Schedule 14A, which requires, among other things, disclosure on the last page of your proxy statement regarding the use of incorporation by reference. Please revise your document accordingly. In the alternative, please file the purchase agreement as an appendix to your proxy statement.

\* \* \*

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with a marked copy of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

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 comments, 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.

Please contact Song Brandon at (202) 551-3621 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey Riedler  
Assistant Director