



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

DIVISION OF  
CORPORATION FINANCE

November 10, 2010

James B. Murphy  
Vice President and Chief Financial Officer  
OXiGENE, Inc.  
701 Gateway Boulevard, Suite 210  
South San Francisco, CA 94080

**Re: OXiGENE, Inc.**  
**Preliminary Proxy Statement on Form PRE14A**  
**Filed November 2, 2010**  
**File No. 000-21990**

Dear Mr. Murphy:

We have completed our review of your filing and do not have any further comments at this time.

Sincerely,

Jeffrey Riedler  
Assistant Director

cc: Asya S. Alexandrovich  
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.  
One Financial Center  
Boston, MA 02111