

*Via Facsimile and U.S. Mail*

November 19, 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.**  
**Form 10-K for the Fiscal Year Ended December 31, 2009**  
**Filed March 16, 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, Esq.  
Mintz Levin Cohn Ferris Glovsky and Popeo PC  
One Financial Center  
Boston, Massachusetts 02111