

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