

Via Facsimile and U.S. Mail
Mail Stop 6010

February 21, 2008

Paul Hawran
Chief Financial Officer
Sequenom, Inc.
3595 John Hopkins Court
San Diego, CA 92121

Re: Sequenom, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2006
Filed March 30, 2007
Form 10-Q for the Quarterly Period Ended September 30, 2007
Filed November 13, 2007
File Number: 000-29101

Dear Mr. Stylli:

We have completed our review of your above Forms 10-K and 10-Q and have no further comments at this time.

Sincerely,

Jim Atkinson
Accounting Branch Chief