



DIVISION OF  
CORPORATION FINANCE

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

Mail Stop 3030

September 30, 2015

Via E-mail

Ms. Carolyn D. Beaver  
Chief Financial Officer  
Sequenom, Inc.  
3595 John Hopkins Court  
San Diego, California 92121

**RE: Sequenom, Inc.**  
**Form 10-K for Fiscal Year Ended December 31, 2014**  
**Filed March 10, 2015**  
**File No. 000-29101**

Dear Ms. Beaver:

We have completed our review of your filings. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or the filings 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. We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings include the information the Securities Exchange Act of 1934 and all applicable rules require.

Sincerely,

/s/ Kevin Kuhar

Kevin Kuhar  
Accounting Branch Chief  
Office of Electronics and Machinery