



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