



DIVISION OF
CORPORATION FINANCE

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

June 25, 2014

Via Facsimile

Tyler W. Painter
Chief Financial Officer
Solazyme, Inc.
225 Gateway Boulevard
South San Francisco, California 94080

Re: Solazyme, Inc.
Form 10-K for Fiscal Year Ended December 31, 2013
Filed March 14, 2014
File No. 1-35189

Dear Mr. Painter:

We have completed our review of your filing. 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 filing 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 filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable rules require.

Sincerely,

/s/ Terence O'Brien

Terence O'Brien
Branch Chief