



DIVISION OF
CORPORATION FINANCE

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

May 31, 2013

Via E-mail

Jonathan S. Wolfson
Chief Executive Officer
Solazyme, Inc.
225 Gateway Boulevard
South San Francisco, CA 94080

RE: Solazyme, Inc.
Form 10-K for the Year ended December 31, 2012
Filed March 13, 2013
File No. 001-35189

Dear Mr. Wolfson:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Year Ended December 31, 2012

Note 7. Investments in Joint Ventures and Related Party Transactions, page 99

1. In future filings please disclose your maximum exposure to loss as a result of your involvement with each VIE. Refer to ASC 810-10-50-4(c) for guidance.
2. You disclose that you are not the primary beneficiary of Solazyme Bunge and Solazyme Roquette Nutritionals. In future filings please disclose your methodology for determining whether you were the primary beneficiary of your VIE's, including, but not limited to, significant judgments and assumptions made. Refer to ASC 810-10-50-5A. Please show us your proposed future disclosure.

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 Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to 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.

You may contact Tracey McKoy, Staff Accountant, at (202) 551-3772 or, in her absence, the undersigned Accounting Branch Chief at (202) 551-3355, if you have questions regarding comments on the financial statements and related matters.

Sincerely,

/s/ Terence O'Brien

Terence O'Brien
Accounting Branch Chief