



DIVISION OF
CORPORATION FINANCE

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

December 14, 2012

Via E-mail

John Nicols
Chief Executive Officer
Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063

**RE: Codexis, Inc.
Form 10-Q for the Fiscal Quarter Ended September 30, 2012
Filed November 7, 2012
File No. 001-34705**

Dear Mr. Allott:

We have reviewed your filing and have the following comments. 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 amending your filing, 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 or do not believe an amendment is appropriate, 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-Q for the Fiscal Quarter Ended September 30, 2012

Critical Accounting Policies and Estimates, page 24

1. Please tell us whether you have tested goodwill for impairment as a result of the termination of the collaborative research agreement with Shell in September 2012 and describe the results. Explain the basis for your conclusions. Refer to ASC 350-20-35-30.
2. Please tell us whether you have reviewed your long-lived assets for impairment, including your intangible assets and your laboratory equipment, due to the termination of the Shell research agreement and related changes in your operations and expected future cash flows. Explain the basis for your conclusions. Refer to ASC 360-10-35-21.

Financial Operations Overview, page 24

3. In future filings, please provide a more detailed analysis of the factors that impact your operations, including a complete discussion of known or anticipated trends that may continue to have an impact. Your discussion and analysis is to provide investors with sufficient information to understand the historical trends and the expectations for the future as seen through the eyes of management. Refer to Section 501.04 of the Financial Reporting Codification and SEC Release 33-8350 for guidance. In your supplemental response, please provide us with draft disclosure addressing the following issues:
 - Provide a quantified analysis of the impact on future operations expected from the termination of the Shell agreement.
 - Please quantify the decrease in sales of your statin-family of products and your sales of products used in on-patent hepatitis C, diabetic and dementia therapies, explain the underlying reasons for the decreases and discuss any known trends or events with the potential to materially impact future operations.
 - Expand your discussion of the decrease in gross margin on product sales in the third quarter to quantify changes in product mix and explain the underlying reasons for the decrease in specific higher margin products.
 - You refer to the termination of collaborations in carbon management in December 2011. Please provide an expanded discussion of this and explain the expected and potential future impact to your operations.
 - Discuss the decrease in inventories, the underlying reasons, and the expected future impact on operations.

Restructuring Charges All Plans, page 27

4. In future filings, please provide the complete disclosures required by SAB Topic 5:P.4, including the expected effects on future earnings and cash flows resulting from each restructuring plan, including quantification of the dollar amounts and the period the effects are expected to be realized. In subsequent periods, discuss whether you actually realize the cost savings.

Liquidity and Capital Resources, page 33

5. In future filings, please provide a discussion of liquidity that provides a clear picture of the resources available to meet your future cash needs. Discuss changes in capital resources, such as the decrease in marketable securities and other assets. Discuss events, trends and material changes expected to impact your ability to meet cash requirements.
6. Please provide us with a discussion that analyzes the expected and potential impacts to your liquidity and financial position from the termination of your collaboration agreement with Shell. Robustly explain management's expectations and considerations, including your expectations for the results of future operations and the resulting impact on cash flows and liquidity. Discuss the need to obtain third party funding to support your advanced biofuels and outline your prospects. Explain the potential effects on your

Mr. Nicols
Codexis, Inc.
December 14, 2012
Page 3

operations, financial position and liquidity in the event you do not obtain third party funding. In drafting your response, please refer to Item 303 of Regulation S-K, as well as the guidance in Section 501.03 of the Codification of Financial Reporting Policies and Section IV of SEC Release 33-8350.

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