



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 4631

March 10, 2010

Via U.S. mail

Douglas T. Sheehy
Senior Vice President, General Counsel and Secretary
Codexis, Inc.
200 Penobscot Drive
Redwood City, CA 94063

**RE: Codexis, Inc.
Amendment No. 4 to Form S-1
Filed February 26, 2010
File No. 333-164044**

Dear Mr. Sheehy:

We have reviewed your filing and have the following comments.

Management, page 98

Risk Oversight, page 103

1. We note your disclosure addressing certain aspects of newly-adopted Item 402(s) of Regulation S-K. As you have not included a discussion of your policies and practices for compensating your employees as they relate to risk management practices and risk-taking incentives, we assume you have concluded that you are not reasonably likely to suffer a material adverse effect because of any risks arising from your compensation policies and practices for your employees. Please tell us supplementally why you have reached this conclusion.
2. We note the additional disclosure provided under this heading. Please disclose the effect on the board's leadership structure of the board's role in performing its risk oversight function. See Item 407(h) of Regulation S-K.

Executive Compensation, page 107

Annual Cash Incentive Bonus for 2009, page 111

3. We note the revisions under this heading, including the discussion of the payout determinations made by your compensation committee in February 2010. Please revise the table on page 113 to add a column for the company performance factor so that the amounts of the actual bonus payments can be calculated from a review of the table. In addition, please revise your disclosure to address how the compensation committee arrived at a 140% factor for the 2009 individual performance factor for each named executive officer. In doing so, please address whether the committee intentionally decided to assign the same individual performance factor to each named executive officer. If this decision was intentional, please explain why. In this regard, we note your disclosure about the myriad individual performance factors applicable to the named executive officers, which could suggest that the same types of performance factors were not applicable to all of your named executive officers.

2009 Summary Compensation Table, page 117 and Grants of Plan-Based Awards in 2009 Table, page 118

4. In the footnote disclosure to each of these tables, you refer the reader to Note 12 to your financial statement for the valuation assumptions used to determine the amounts in the tables. It appears that these assumptions are actually contained in Note 13. Please revise the footnote cross-references accordingly.

Part II – Information Not Required in Prospectus, page II-1

Item 16. Exhibits and Financial Statement Schedules, page II-3

5. Please tell us what consideration you have given to filing the following as exhibits:
 - Agreement entered into Dishman Pharmaceuticals and Chemicals, Ltd., page 19.
 - Exclusive Joint Development Agreement entered into with CO₂ Solution, page 71.
 - Master Services Agreement entered into with Arch Pharmed Labs Limited, page 83.

See Item 601(b)(10) of Regulation S-K.

Mr. Douglas T. Sheehy
Codexis, Inc.
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As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

You may contact Tracey McKoy, Staff Accountant, at (202) 551-3772 or Al Pavot, Staff Accountant, at (202) 551-3738 if you have questions regarding comments on the financial statements and related matters. Please contact Hagen Ganem, Staff Attorney, at (202) 551-3330 or Dietrich King, Staff Attorney, at (202) 551-3338 with any other questions.

Sincerely,

Pamela A. Long
Assistant Director

cc: Patrick A. Pohlen (via facsimile to (650) 463-2600)
Latham & Watkins LLP