



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 4631

February 16, 2010

Via U.S. mail and facsimile

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

**RE: Codexis, Inc.
Form S-1/A filed February 1, 2010
File No. 333-164044**

Dear Mr. Sheehy:

We have reviewed your filing and have the following comments.

Management, page 102

Executive Compensation, page 110

Components of Our Executive Compensation Program, page 110

1. It appears from your disclosure in the last paragraph on page 111 and elsewhere (e.g., on page 112 your description of how you used the peer group 50th percentile as a justification of certain salary increases) that you use compensation paid at peer companies as a benchmark for your named executive officers' compensation. Please revise your disclosure to clarify whether you benchmark total compensation or any components of compensation and, if so, discuss where you target your executive officers' compensation relative to the peer group data you collect and state where such compensation actually fell with respect to those targets. See Item 402(b)(2)(xiv) of Regulation S-K.

Equity Incentive Compensation, page 115

2. We note that you granted Mr. Lawson an initial stock option to purchase 400,000 shares of your common stock. Please discuss how your compensation committee determined the size of the option award in light of your stated compensation objectives. See Items 402(b)(1)(v) and (vi) of Regulation S-K.

Mr. Douglas T. Sheehy
Codexis, Inc.
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Item 16. Exhibits and Financial Statement Schedules, page II-3

3. Please tell us what consideration you have given to filing as exhibits the offer letter agreements entered into with Mr. Lawson and Dr. Sarret, as referred to on pages 121 and 122. See Item 601(b)(10)(iii) of Regulation S-K.

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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)
Latham & Watkins LLP