



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4720

February 5, 2016

Fredrik Wiklund  
President and Chief Executive Officer  
Celladon Corporation  
12707 High Bluff Drive, Suite 200  
San Diego, CA 92130

**Re: Celladon Corporation  
Amendment No. 1 to Registration Statement on Form S-4  
Filed January 22, 2015  
File No. 333-208521**

Dear Mr. Wiklund:

We have reviewed your registration statement 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 by amending your registration statement and providing the requested information. 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 any amendment to your registration statement and the information you provide in response to our comments, we may have additional comments.

Background of the Merger, page 80

1. We note your response to our prior comment 8. However, we believe that the specific reason(s) for not pursuing transactions with each of Parties 1, 2, 3, 4, 5, and 6 is material information to your shareholders. Please revise your narrative discussion of the background of the transaction to indicate when you decided not to pursue each of the alternative transactions and which of the desired elements was missing.

Considerations with Respect to U.S. Federal Income Tax Consequences . . . , page 112

2. Please revise your registration statement to remove the assumptions that the merger will qualify as reorganization. The tax opinion should not assume any legal conclusions

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necessary for counsel to render its opinion on the tax consequences of the merger. Refer to Section III.C.3. of Staff Legal Bulletin 19.

Please contact Alla Berenshteyn at (202) 551-4325 or me at (202) 551-3675 with any questions.

Sincerely,

/s/ Suzanne Hayes

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance

cc: Via E-mail  
Patty M. DeGaetano  
Pillsbury Winthrop Shaw Pittman LLP