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February 8, 2016

VIA EDGAR

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549
Attention: Suzanne Hayes, Assistant Director
Alla Berenshteyn, Staff Attorney

Re: Celladon Corporation
Registration Statement on Form S-4
File No. 333-208521

Ladies and Gentlemen:

On behalf of our client, Celladon Corporation (“**Celladon**”), we provide the following information in response to the comments received from the staff (the “**Staff**”) of the U.S. Securities and Exchange Commission (the “**Commission**”) in its letter to Celladon dated February 5, 2016. The number of the responses and the headings set forth below correspond to the numbered comments and headings in the letter from the Staff.

In addition, we are concurrently sending to the Staff three marked copies of Amendment No. 2 (“**Amendment No. 2**”) to Registration Statement on Form S-4 (the “**Registration Statement**”) as filed with the Commission on February 8, 2016, marked against Amendment No. 1 to the Registration Statement filed with the Commission on January 22, 2016. All page number references contained in Celladon’s responses below correspond to the page numbers in Amendment No. 2.

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.*

Response: Celladon acknowledges the Staff’s comment and has provided additional disclosure on pages 84, 85, 86 and 89 to indicate when Celladon 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 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.*



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Response: In response to the Staff's comment, Celladon has revised the disclosure on pages 4, 16, 17, 114 and 115 to remove the assumptions that the merger will qualify as reorganization.

Celladon respectfully requests the Staff's assistance in completing the review of Amendment No. 2 to the Registration Statement as soon as possible. Please let us know if we can provide any further information or assistance to facilitate your review. Please contact the undersigned at (858) 509-4033 or Mike Hird at (858) 509-4024.

Very truly yours,

/s/ Patty M. DeGaetano

Patty M. DeGaetano

cc: Celladon Corporation

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