

November 20, 2018

Christopher A. Kroeger, M.D., M.B.A.  
President and Chief Executive Officer  
OvaScience, Inc.  
9 Fourth Avenue  
Waltham, MA 02451

Re: OvaScience, Inc.  
Registration Statement on Form S-3  
Response dated November 16, 2018  
File No. 333-228209

Dear Dr. Kroeger:

We have reviewed your November 16, 2018 response to our comment letter and have the following comment.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comment applies 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 this comment, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our November 15, 2018 letter.

Form S-3/A

General

1. We note your response to comment 1. However, the result of the purchasers' ability to waive unsatisfied conditions is that the purchasers have control over closing conditions. Therefore, our comment is reissued. You may withdraw the registration statement and refile it after the shares have been issued or you may renegotiate the purchase agreement to remove the purchasers' right to waive unsatisfied conditions.

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You may contact Jeffrey Gabor at 202-551-2544 or Suzanne Hayes at 202-551-3675 with any questions.

Sincerely,

FirstName LastName Christopher A. Kroeger, M.D., M.B.A.

Division of Corporation

Finance  
Comapany Name OvaScience, Inc.

Office of Healthcare &

Insurance  
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cc: Megan Gates, Esq.  
FirstName LastName