



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4546

April 21, 2017

David A. Dodd  
President and Chief Executive Officer  
Aeterna Zentaris Inc.  
315 Sigma Drive, Suite 302D  
Summerville, South Carolina 29486

**Re: Aeterna Zentaris Inc.  
Amendment No. 1 to Registration Statement on Form F-3  
Filed April 14, 2017  
File No. 333-216853**

Dear Mr. Dodd:

We have reviewed your amended 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 these comments, we may have additional comments. Unless we note otherwise, our references to prior comments are to comments in our April 7, 2017 letter.

Prospectus Cover Page

1. We note your response to our prior comment 2 and reissue in part. Please list the rights at the top of the prospectus cover page underneath the common shares.

Exhibit 5.1

2. Please have counsel revise to opine that the rights are a binding obligation of the company under the law of the jurisdiction governing the rights agreement. Refer to Section II.B.1.f of Staff Legal Bulletin No. 19 for guidance.

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We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Ada D. Sarmento at (202) 551-3798 or Erin Jaskot at (202) 551-3442 with any questions.

Sincerely,

/s/ Erin K. Jaskot, *for*

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance

cc: Elliot Shapiro  
Norton Rose Fulbright Canada LLP