



DIVISION OF
CORPORATION FINANCE

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

July 8, 2010

Mr. Dennis Turpin
Senior Vice President and Chief Financial Officer
Aeterna Zentaris Inc.
1405 du Parc-Technologique Blvd.
Quebec City, Quebec
Canada G1P 4P5

Re: Aeterna Zentaris Inc.
Form 20-F for the Fiscal Year Ended December 31, 2009
File No. 000-30752

Dear Mr. Turpin:

We have reviewed your filing and have the following comments. In our comments, we ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. Where a comment requests you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the annual or quarterly filing, as applicable, in which you intend to first include it. If you do not believe a comment applies to your facts and circumstances, please tell us why in your response. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your responses to our comments.

After reviewing the information provided, we may have additional comments and/or request that you amend your filing.

Form 20-F for the Fiscal Year Ended December 31, 2009

Regulatory Compliance, page 47

1. Please revise your disclosure to provide a description of the material effects of government regulations on your business, identifying the regulatory body. See Item 4.B.8 of Form 20-F.

Item 5. Operating and Financial Review and Prospects

R& D Costs, page 66

2. Please refer to your tabular disclosure summarizing primary third-party R&D costs by product. Revise your table to disclose the amount of all R&D costs by product as reflected in your statement of operations for each period presented.
3. You disclose on page 77 that during 2010, you expect to focus on R&D efforts vis-à-vis your later-stage compounds, including perifosine, AEZS-108 and Solorel. For each significant R&D project, please revise your disclosure to address the following:
 - The costs incurred to date on each project;
 - The nature, timing and estimated costs of the efforts necessary to complete the project; and,
 - The period in which material net cash inflows from significant projects are expected to commence.

Please disclose your criteria for deeming a R&D project significant. For the remainder of the projects that you do not deem significant, disclose the number of projects by indication or other descriptive class/category showing preclinical versus clinical and provide an estimate of the nature, timing and cost to complete these projects.

Critical Accounting Policies and Estimates

Revenue Recognition and Deferred Revenues, page 72

4. You disclose that sales of products are net of estimated sales allowances and rebates. Please revise to disclose the amount of each accrual at each balance sheet date and the amount recorded in results of operations for each period presented of the change in the prior period estimate for each accrual.

Outlook for 2010

Perifosine, page 76

5. Based on your disclosure starting on page 47, certain US, European and Japanese patents for Perifosine will expire in 2013. You also disclose that patent extensions of up to five years may be possible. Please disclose the probability of these extensions being granted. If the probability of patent extensions is low, disclose the expected effect from these patent expirations on your future operations and financial position and your strategic relationship with Keryx Biopharmaceuticals, which you expect to provide a substantial portion of your future revenues.

Revenue expectations, page 77

6. You disclose on page 48 that the U.S. and European patents for the compound cetorelix will expire in 2010 and 2013, respectively. Cetorelix appears to be the active compound for your only current commercialized product Cetrotide. Please revise to disclose the expected effect on your results of operations and financial position of the expiration of U.S patent 5,198,533 and European patent 0 299 402.

Item 10. Additional Information

C. Material Contracts

Other Material Contracts, page 108

7. Please revise regarding your license and collaboration agreement with Keryx to disclose the term and termination provisions of this agreement.

Consolidated Financial Statements

Notes to Consolidated Financial Statements

5. Sale of Cetrotide royalty stream, page 136

8. You disclose that Merck Serono is obligated to pay royalties, related to its sale of Cetrotide, through the expiry date of your underlying patent rights and that “Merck Serono is expected to pay Cowen over the term of the underlying arrangements.” Please disclose the expiry date for the underlying patent rights and the term of the “underlying arrangements” if different.
9. Please revise your disclosure to describe the nature of the transaction costs that have been capitalized as deferred charges. Explain to us your basis under U.S. GAAP for capitalizing these costs.

13. Intangible assets, page 140

10. In 2009, you recognized \$3.8 million of impairment related to cetorelix intangible assets asserting that the carrying value was no longer recoverable. You appear to have based this conclusion after your announcements that your second Phase 3 study with cetorelix in BPH had not reached its primary endpoint and sanofi had decided to terminate the related development, commercialization and license agreement. Please explain to us why the entire carrying value of cetorelix is no longer recoverable, when it is the active compound in your commercialized product Cetrotide.

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Page 4

19 Income taxes, page 151

11. It appears that you have included only \$9.9 million of the \$13.8 million increase in your income tax valuation allowance in your income tax rate reconciliation. Please explain to us why the remaining \$3.9 million change in your valuation allowance was excluded from the rate reconciliation.

Item 19. Exhibits, page 171

12. You have redacted portions of Exhibits 4.10. You have not requested confidential treatment for the redacted portions of this exhibit. Since you have not promptly submitted a request for confidential treatment of the redacted portions of this exhibit, please amend your Form 6-K filed on November 24, 2008 to reinstate all redactions and re-file the complete agreement in its entirety. In addition, please confirm that you have filed all other material agreements that do not have valid orders for confidential treatment without redactions and in their entirety. For those agreements which you have a valid order for confidential treatment, please revise your exhibit index to indicate which exhibits have a valid confidential treatment order pursuant to which portions of those agreements have been omitted.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please contact Frank Wyman, Staff Accountant, at (202) 551-3660 or Don Abbott, Senior Staff Accountant, at (202) 551-3608, if you have any questions regarding the processing of your response, as well as any questions regarding comments on the financial statements and related matters. You may contact Jennifer Riegel, Staff Attorney, at (202) 551-3575 with questions on any of the other comments. In this regard, do not hesitate to contact me at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief Accountant