

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

April 3, 2019

Gregory Chow
Senior Vice President and Chief Financial Officer
Aptose Biosciences Inc.
251 Consumers Road, Suite 1105
Toronto, Ontario, Canada M2J 4R3

Re: Aptose Biosciences Inc. Form 10-K for the Fiscal Year Ended December 31, 2018 Filed March 12, 2019 File No. 001-32001

Dear Mr. Chow:

We have limited our review of your filing to the financial statements and related disclosures and have the following comment.

Please respond to the comment within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing your response to the comment, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2018

Item 9A. Controls and Procedures, page 44

1. Please revise to include the disclosures required by Item 307 of Regulation S-K. Please also tell us how the omission of these required disclosures impacts your conclusion with respect to the effectiveness of disclosure controls and procedures as of December 31, 2018.

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In closing, 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.

You may contact Mary Mast at (202) 551-3613 or Angela Connell at (202) 551-3426 with any questions.

Sincerely,

Division of Corporation Finance Office of Healthcare & Insurance