

Form 51-102F3
Material Change Report

Item 1 Name and Address of Company

Aptose Biosciences Inc. (“**Aptose**” or the “**Company**”)
251 Consumers Road, Suite 1105
Toronto, ON
M2J 4R3

Item 2 Date of Material Change

June 29, 2018

Item 3 News Release

A news release reporting the material change was issued by Aptose on June 29, 2018 in Canada through Globe Newswire.

Item 4 Summary of Material Change

On June 29, 2018, Aptose announced that the U.S. Food and Drug Administration (“**FDA**”) has notified the Company that it has lifted the clinical hold on APTO-253, Aptose’s investigational drug for hematologic cancers.

Item 5 Full Description of Material Change

On June 29, 2018, Aptose announced that the FDA has notified the Company that it has lifted the clinical hold on APTO-253, Aptose’s investigational drug for hematologic cancers. APTO-253 is the only known clinical-stage molecule that has the potential to directly inhibit expression of the MYC oncogene, shown to be a causative factor in many malignancies, including acute myeloid leukemia (“**AML**”).

Up to fifteen clinical centers are expected to participate in the Phase 1b trial, and the screening and dosing will resume as soon as practicable for patients with relapsed or refractory AML or with high risk myelodysplastic syndromes (MDS). Recent data also highlight the role of MYC gene dysregulation in B-cell malignancies, and Aptose hopes to pursue this patient population in the coming months.

The Phase 1b trial of APTO-253 had been placed on clinical hold as a consequence of an event that occurred at a clinical site with the infusion procedure. Ultimately, a root cause investigation determined that the event resulted from chemistry and manufacturing based issues, all of which were incorporated into a Chemistry, Manufacturing and Control (CMC) amendment to the Investigational New Drug (IND) application.

This material change report contains forward-looking statements within the meaning of Canadian and U.S. securities laws, including, but not limited to, statements regarding the clinical potential and favorable properties of APTO-253, the Phase 1b APTO-253 clinical

trial, the CG-806 IND submission and statements relating to the Company's plans, objectives, expectations and intentions and other statements including words such as "continue", "expect", "intend", "will", "hope", "should", "would", "may", "potential" and other similar expressions. Such statements reflect our current views with respect to future events and are subject to risks and uncertainties and are necessarily based upon a number of estimates and assumptions that, while considered reasonable by us are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause our actual results, performance or achievements to be materially different from any future results, performance or achievements described in this material change report. Such factors could include, among others: our ability to obtain the capital required for research and operations; the inherent risks in early stage drug development including demonstrating efficacy; development time/cost and the regulatory approval process; the progress of our clinical trials; our ability to find and enter into agreements with potential partners; our ability to attract and retain key personnel; changing market and economic conditions; inability of new manufacturers to produce acceptable batches of GMP in sufficient quantities; unexpected manufacturing defects; and other risks detailed from time-to-time in our ongoing quarterly filings, annual information forms, annual reports and annual filings with Canadian securities regulators and the United States Securities and Exchange Commission.

Should one or more of these risks or uncertainties materialize, or should the assumptions set out in the section entitled "Risk Factors" in our filings with Canadian securities regulators and the United States Securities and Exchange Commission underlying those forward-looking statements prove incorrect, actual results may vary materially from those described herein. These forward-looking statements are made as of the date of this report and we do not intend, and do not assume any obligation, to update these forward-looking statements, except as required by law. We cannot assure you that such statements will prove to be accurate as actual results and future events could differ materially from those anticipated in such statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

Item 6 Reliance on subsection 7.1(2) of National Instrument 51-102

Not Applicable.

Item 7 Omitted Information

Not Applicable.

Item 8 Executive Officer

For further information please contact:
Aptose Biosciences Inc.
Gregory K. Chow
Senior Vice President and Chief Financial Officer
647-479-9828

Item 9 Date of Report

June 29, 2018