



NOTICE AND PROXY STATEMENT

**FOR THE
ANNUAL AND SPECIAL MEETING OF SHAREHOLDERS
TO BE HELD ON JUNE 1, 2021**

April 20, 2021

Dear Fellow Shareholders,

As we all are well aware, biotech during a calm year is marked by significant ebb and flow; but 2020 was a year like no other. Despite the challenges COVID presented for so many people and businesses, Aptose continued to advance corporate and clinical milestones throughout the year. We furthered our two clinical-stage investigational products for hematologic malignancies and executed on three clinical trials - two studies with luxetinib (formerly CG-806), an oral, first-in-class mutation-agnostic FLT3/BTK kinase inhibitor that we are calling “lux” for short, and one study with APTO-253, the only clinical-stage agent that directly targets and suppresses expression of the MYC oncogene. We already are well into 2021 and continue to build on a critical and productive year wherein both product candidates progressed in their respective clinical trials – and importantly, we have observed noteworthy clinical activity and no apparent safety trends to date that we believe would prevent further dose escalation in any of our ongoing trials.

A key event of 2020 was initiation of our Phase 1a/b clinical trial of luxetinib in patients with relapsed or refractory acute myeloid leukemia (R/R AML). Luxetinib is like no other drug commercialized or in development. It is the only known clinical agent that potently inhibits both FLT3 and BTK – with a precision that avoids known targets that are often associated with toxicities – giving a broad therapeutic potential across the spectrum of lymphoid and myeloid hematologic malignancies. With distinctive kinase selectivity, lux potently and simultaneously suppresses multiple oncogenic signaling pathways upon which AML cancer cells rely for survival and drug resistance, which is why AML has always been a primary focus in our clinical plan. Despite recent advances in the targeted treatment of AML, the majority of patients will relapse or remain refractory to current therapies, including gilteritinib, midostaurin and venetoclax, and there remains a tremendous need for new therapies that treat the overall disease by simultaneously crippling multiple dysregulations used by the AML cells to survive.

In October, we were grateful that the FDA allowed us to initiate dosing in the AML trial with a 450 milligram twice daily dose based on data from our Phase 1a/b B-cell trial, which showed that the 450 milligram dose level was safe, well tolerated, and achieved plasma exposure levels that inhibited phospho-FLT3 activity, a key driver of AML. We swiftly enrolled patients on study drug, including both AML patients with the FLT3-ITD mutation, as well as patients with wild-type FLT3.

At the first dose level of 450 milligrams BID, we observed exposures leading to meaningful inhibition of multiple oncogenic driver kinases by plasma inhibitory assay (PIA), as well as encouraging anti-leukemic activity in two patients with R/R AML. It’s important to remind you that all of the patients in our AML trial, similar to our B-cell trial, are relapsed and refractory patients who already have been treated with the best currently available therapeutics. So, this early activity in this AML patient population is certainly inspiring to us and driving enthusiasm among our investigators, which is helping to accelerate enrollment in the study. We have completed the 450 milligram BID dose cohort and have escalated to the 600 milligram BID dose level. We look forward to reporting to you further on our AML trial around the European Hematology Association (EHA) meeting in June and later in the year during the American Society of Hematology (ASH) meeting in December.

Luxetinib also is in a Phase 1a/b trial in relapsed or refractory B cell malignancies, including chronic lymphocytic leukemia (CLL), small lymphocytic lymphoma (SLL) and non-Hodgkin lymphoma (NHL), in patients who have failed or are intolerant to standard therapies. We continued dose escalation throughout 2020 and now are treating patients at the fifth dose level of 750 mg BID. To date, Aptose has observed on-target activity, including inhibition of multiple oncogenic driver kinases, lymphocytosis and tumor reductions in several patients, suggesting formal clinical responses may emerge. We look forward to reporting updates to you during EHA and ASH.

The clinical activity observed with luxetpinib to date gives us the confidence to prepare for the next level of maturation as a development-stage biotech company. Towards this vision, we have recruited quality senior talent and strengthened our expanding clinical, regulatory and CMC functions. Likewise, we are conducting “behind-the-scenes” work that we hope will lead to improvements in drug formulation and manufacturing processes, and significantly expand our drug substance manufacturing capabilities.

During 2020, we also progressed our clinical trial with APTO-253, our somewhat “under the radar” MYC inhibitor being tested in a Phase 1a/b trial in relapsed or refractory AML and myelodysplastic syndrome (MDS) patients. APTO-253 is the only known clinical-stage molecule that can directly target and suppress expression of the MYC oncogene, a major driver of cancer cell proliferation in many malignancies, including hematologic malignancies. While we are still in the early stages of clinical development for APTO-253, we remain intrigued with its potential. In the ongoing Phase 1a/b clinical study of APTO-253 in patients with relapsed or refractory AML or high-risk MDS, Aptose has escalated dosing to the fifth dose level of 150 mg/ m². APTO-253 treatment thus far has demonstrated consistent MYC repression, an indicator of on-target activity that suggests future potential for broad oncology application. The investigational drug continues to be well tolerated with no evidence of drug-related adverse events, including no observed myelosuppression.

Also during 2020, as a result of our progress and market conditions, we appreciably strengthened our financial position. Our current cash position and access to available sources provide us comfortable runway into the first half of 2023. We also attracted new industry, analyst and investor interest, and appreciated the opportunity to present at multiple virtual conferences.

I am exceptionally proud of our accomplishments during 2020. That momentum continues, and we look forward to what promises to be an exciting year for Aptose in 2021. We are especially grateful for the patients, families and investigators who are participating in our clinical trials and supporting our efforts to create better therapeutics. I also recognize our entire Aptose organization and thank all of you who have participated in advancing our essential work. Thank you, too, to our shareholders, for your support and for being part of our journey.

Sincerely,
William G. Rice, Ph.D.
Chairman, President and Chief Executive Officer

Aptose Biosciences Inc.
Notice of 2021 Annual and Special Meeting of Shareholders

NOTICE IS HEREBY GIVEN that the annual and special meeting (the “Meeting”) of shareholders of Aptose Biosciences Inc. (the “Corporation”) will be held on June 1, 2021 at 10:00 a.m. (Pacific time). The Meeting will be conducted as an online only annual and special meeting. There will be no physical location for shareholders and duly appointed proxyholders to attend. Shareholders and duly appointed proxyholders may attend the virtual Meeting online at <https://web.lumiagm.com/408550733>, where they will be able to listen, vote, and submit questions during the Meeting’s live webcast.

What the Meeting is About

The following items of business will be covered at the Meeting:

1. receiving the financial statements of the Corporation for the fiscal year ended December 31, 2020, including the auditor’s report thereon;
2. electing seven directors to serve until the 2022 Annual Meeting of Shareholders;
3. appointing KPMG LLP as the independent registered public accounting firm of the Corporation for the fiscal year ending December 31, 2021;
4. passing an ordinary resolution, the full text of which is set forth in the accompanying proxy statement (the “Proxy Statement”), authorizing the adoption of the Corporation’s 2021 stock incentive plan;
5. passing an ordinary resolution, the full text of which is set forth in the Proxy Statement, authorizing the adoption of the Corporation’s 2021 employee stock purchase plan;
6. passing an advisory (non-binding) resolution on the compensation of the Corporation’s named executive officers, as more particularly described in the Proxy Statement;
7. passing an advisory (non-binding) resolution on the frequency of future “say on pay” votes, as more particularly described in the accompanying Proxy Statement; and
8. transacting such other business as may be properly brought before the Meeting.

The shareholders may also consider other business that properly comes before the Meeting or any adjournment of the Meeting. The Proxy Statement provides additional information relating to the matters to be dealt with at the Meeting and forms part of this notice.

You have the right to vote

You are entitled to receive notice of and vote at the Meeting, or any adjournment, if you are a holder of common shares of the Corporation at the close of business on April 19, 2021.

You have the right to vote your shares on items 2 through 7 listed above and any other items that may properly come before the Meeting or any adjournment.

The Notice of Meeting, Proxy Statement and the form of proxy will be mailed to you on or around May 3, 2021. Detailed instructions regarding shareholders’ voting process are also available on our website at <https://www.aptose.com/investors/news-events/ir-calendar>.

Your vote is important

If you are not able to attend the virtual Meeting, please exercise your right to vote by signing and returning the enclosed form of proxy to Computershare Investor Services Inc., 100 University Avenue, 8th Floor, Toronto, Canada M5J 2Y1, so as to arrive not later than 5:00 p.m. (Toronto time) on May 28, 2021 or, if the Meeting is adjourned, 48 hours (excluding Saturdays, Sundays and holidays) before any adjournment of the Meeting.

BY ORDER OF THE BOARD OF DIRECTORS

William G. Rice, Ph.D.
Chairman, President and Chief Executive Officer
April 20, 2021

**IMPORTANT NOTICE REGARDING THE INTERNET AVAILABILITY OF PROXY
MATERIALS FOR THE ANNUAL AND SPECIAL MEETING OF SHAREHOLDERS TO BE
HELD ON JUNE 1, 2021.**

Our Notice of 2021 Annual and Special Meeting of Shareholders, Proxy Statement and Annual Report to Shareholders are available on the Corporation's website at <https://www.aptose.com/investors/news-events/ir-calendar>.

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TABLE OF CONTENTS

GENERAL INFORMATION ABOUT THE PROXY STATEMENT	1
QUESTIONS ABOUT THE ANNUAL AND SPECIAL MEETING AND VOTING YOUR SHARES	1
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS.....	11
VOTING SECURITIES AND PRINCIPAL HOLDERS OF VOTING SECURITIES.....	11
SHARE OWNERSHIP OF CERTAIN BENEFICIAL OWNERS, MANAGEMENT AND DIRECTORS.....	12
RECEIPT OF FINANCIAL STATEMENTS	13
PROPOSAL NO. 1—ELECTION OF DIRECTORS.....	13
Board Recommendation	17
CORPORATE GOVERNANCE	17
Board Mandate	18
Composition and Independence of the Board.....	18
Board Leadership.....	19
Board Oversight of Risk.....	19
Nomination of Directors.....	20
Diversity	21
Director Term Limits and Other Mechanisms of Board Renewal.....	22
Position Descriptions.....	22
Orientation and Continuing Education	22
Assessments.....	22
Meeting Attendance.....	23
Executive Sessions	23
Ethical Business Conduct.....	23
Conflicts of Interest	24
Shareholder Communications with the Board.....	24
Board Committees.....	24
PROPOSAL NO. 2—APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	27
Board Recommendation	27
Audit, Audit-Related, Tax and Other Fees	27
Pre-Approval Policies and Procedures	27
Audit Committee Report	28
PROPOSAL NO. 3—ADOPTION OF THE CORPORATION’S 2021 STOCK INCENTIVE PLAN	29
New Incentive Plan Highlights and Certain Important Provisions.....	29

New Plan Benefits	30
Summary of the New Incentive Plan	30
U.S. Federal Income Tax Consequences	33
Canadian Federal Income Tax Consequences	34
Approval	37
Board Recommendation	38
PROPOSAL NO. 4—APPROVAL OF THE CORPORATION’S 2021 EMPLOYEE STOCK PURCHASE PLAN.....	39
ESPP Highlights	39
New Plan Benefits	39
Summary of Material Provisions of the ESPP	39
U.S. Federal Income Tax Consequences	41
Canadian Federal Income Tax Consequences	41
Approval	42
Board Recommendation	43
PROPOSAL NO. 5—ADVISORY (NON-BINDING) VOTE ON THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS.....	44
Board Recommendation	45
PROPOSAL NO. 6—ADVISORY (NON-BINDING) VOTE ON THE FREQUENCY OF FUTURE SHAREHOLDER “SAY-ON-PAY” VOTES	46
Board Recommendation	46
EXECUTIVE COMPENSATION.....	47
Information About Our Executive Officers	47
Independent Advice	49
Comparator Group	50
Summary Compensation Table	53
Outstanding Equity Awards at Fiscal Year-End	55
Retirement Benefits	56
Termination and Change of Control Benefits	56
DIRECTOR COMPENSATION	57
Overview	57
Cash Compensation	57
Option Awards	57
EQUITY COMPENSATION PLAN INFORMATION	58
General	58
New Incentive Plan	58
Share Option Plan	59
2015 Stock Incentive Plan	60
Employee Share Purchase Plan	62
Equity Compensation Plan Information	62

Securities issuable under equity compensation plans as a percentage of outstanding Shares	63
Annual Burn Rate	63
INTEREST OF CERTAIN PERSONS IN MATTERS TO BE ACTED UPON.....	64
INTEREST OF RELATED PERSONS IN TRANSACTIONS	64
HOUSEHOLDING OF ANNUAL PROXY MATERIALS	65
INDEBTEDNESS.....	65
DIRECTORS AND OFFICERS' LIABILITY.....	65
MANAGEMENT CONTRACTS	65
ADDITIONAL INFORMATION.....	65
DIRECTORS' APPROVAL	66

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GENERAL INFORMATION ABOUT THE PROXY STATEMENT

The information contained in this proxy statement (the “Proxy Statement”) is furnished in connection with the solicitation of proxies to be used at the annual and special meeting (the “Meeting”) of holders (the “Shareholders”) of common shares (the “Shares”) of Aptose Biosciences Inc. (the “Corporation”, “Aptose”, “we” or “our”) to be held on June 1, 2021 at 10:00 a.m. (Pacific time) and at all adjournments thereof, for the purposes set forth in the accompanying notice of meeting (the “Notice of Meeting”). The Meeting will be held online at <https://web.lumiagm.com/408550733>. There will be no physical location for shareholders and duly appointed proxyholders to attend.

The information contained in this Proxy Statement is given as at April 20, 2021 except where otherwise noted. All references to “dollar” or the use of the symbol “\$” are to United States dollars and use of the symbol “CA\$” refers to Canadian dollars, unless otherwise indicated.

QUESTIONS ABOUT THE ANNUAL AND SPECIAL MEETING AND VOTING YOUR SHARES

What are the date, time and place of the Meeting?

The Meeting will be held on June 1, 2021 at 10:00 a.m. (Pacific time). The Meeting will be held online at <https://web.lumiagm.com/408550733>. There will be no physical location for shareholders and duly appointed proxyholders to attend. The meeting will be accessible 15 minutes prior to start time.

How can I access the Meeting virtually?

To participate in the Meeting, visit <https://web.lumiagm.com/408550733>. Registered Shareholders and duly appointed and registered proxyholders will be able to listen, vote and ask questions via the virtual meeting platform. It is to be noted, however, that questions cannot be submitted prior to the Meeting. Non-registered Shareholders who have not appointed themselves as proxy holders will only be able to attend the Meeting as “Guests” and will not be able to vote or ask questions at the Meeting. To access the Meeting virtually, registered Shareholders and duly appointed proxyholders will need an Internet connection and an Internet connected device (such as a desktop, laptop, tablet or cell phone) running the most updated version of applicable software and plugins. The virtual meeting platform is fully supported across browsers (Microsoft Edge, Chrome, Firefox and Safari). Participants in the Meeting must be connected to Internet at all times during the Meeting in order to vote when balloting commences. A summary of the information Shareholders will need to attend the Meeting is provided below:

1. Registered Shareholders and duly appointed proxyholders can participate in the Meeting by clicking “**I have a login**” and entering a Username and Password before the start of the Meeting.
 - a. Registered Shareholders – The 15-digit control number located on the form of proxy or in the email notification you received is the Username and the Password is “aptose2021”.
 - b. Duly appointed proxyholders – Following the registration of the proxyholder with Computershare, Computershare will provide the proxyholder with a Username after the voting deadline has passed. The Password to the Meeting is “aptose2021”.
2. Voting at the Meeting will only be available for registered Shareholders and duly appointed and registered proxyholders. Non-registered Shareholders who have not appointed themselves may

attend the Meeting by clicking “**I am a guest**” and completing the online form. This will allow them listen to the Meeting however they will not be able to vote or submit questions.

3. Registered Shareholders who use a 15-digit control number to login to the online Meeting and who accept the terms and conditions will be revoking any and all previously submitted proxies. However, in such a case, registered Shareholders will be provided the opportunity to vote by ballot on the matters put forth at the Meeting. If registered Shareholders do not wish to revoke all previously submitted proxies, they should not accept the terms and conditions, in which case they can only enter the Meeting as a guest.

If you attend the Meeting, it is important that you remain connected to the internet at all times during the Meeting in order to vote when balloting commences. It is your responsibility to ensure connectivity for the duration of the Meeting. You will be able to access the Meeting 15 minutes before the start time and should allow ample time for online check-in, which will begin at 9:45 a.m. (Pacific time) on June 1, 2021.

Why is the Meeting held virtually?

By conducting our Meeting online, the Board is aiming at limiting travel and social contact related to the Meeting and, as such, minimizing the contamination risks posed by large-in person gatherings in light of the current COVID-19 outbreak. The virtual format will also provide Shareholders an opportunity to participate in the Meeting without incurring significant travel costs or being restricted by time constraints.

The format of the Meeting has been designed to ensure that Shareholders who attend the Meeting online will be afforded the same rights and opportunities to participate as they have in previous annual shareholders’ meeting. Directors will also attend the Meeting via the virtual platform.

Can I submit questions prior or at the Meeting?

Registered Shareholders and duly appointed and registered proxyholders can ask questions during the Meeting via the virtual meeting platform. It is to be noted, however, that questions cannot be submitted prior to the Meeting. Questions pertinent to the Meeting matters will be answered at a designated time during the Meeting, subject to time constraints. The chair of the Meeting reserves the right to edit or reject questions it deems irrelevant to meeting matters, profane or inappropriate.

The chair of the Meeting has broad authority to conduct the Meeting in an orderly manner. To ensure the Meeting is conducted in a manner that is fair to all Shareholders, the chair of the Meeting may exercise its discretion in recognizing Shareholders who wish to participate, in determining the order in which questions are answered, and the amount of time devoted to each question. However, consistent with prior annual shareholders’ meeting, questions submitted in accordance with the rules of conduct generally will be addressed in the order received during the allotted time for questions.

Who can vote at the Meeting?

Only Shareholders as of the close of business on the record date, being April 19, 2021, are entitled to receive notice of and vote on matters to be presented at the Meeting, or any adjournment or postponement thereof, in the manner and subject to the procedures described in this Proxy Statement and the accompanying form of proxy.

At the close of business on the record date, 88,943,243 Shares were issued and outstanding.

Each Shareholder is entitled to one vote per Share held on all matters to come before the Meeting. Common shares of Aptose are the only securities of Aptose which will have voting rights at the Meeting.

What is the quorum for the Meeting?

The presence at the opening of the Meeting of two persons who are entitled to vote either as Shareholders or as proxy holders and holding or representing not less than 33⅓% of the outstanding Shares entitled to vote at the Meeting as of the record date will constitute a quorum for the transaction of business at the Meeting. In general, Shares represented by a properly signed and returned form of proxy, or properly voted by Internet or telephone, or voted by your broker will be counted as Shares present and entitled to vote at the Meeting for purposes of determining a quorum. Shares represented by proxies marked “Abstain” and “broker non-votes” are also counted in determining whether a quorum is present.

What does it mean to vote by proxy?

Voting by proxy means that you are giving the person or people named on your form of proxy (the “proxyholder”) the authority to vote your Shares for you at the Meeting or any adjournment. A form of proxy is included with this Proxy Statement.

The management representatives named on the form of proxy will vote your Shares for you, unless you appoint someone else to be your proxyholder. You have the right to appoint a person to represent you at the Meeting other than the persons named on the form of proxy. If you appoint someone else, he or she must be present at the Meeting to vote your Shares. If you want to appoint someone else, you can insert that person’s name in the blank space provided in the form of proxy. That other person does not need to be a Shareholder of the Corporation.

If you are voting your Shares by proxy, our transfer agent, Computershare Investor Services Inc. (“Computershare”), must receive your completed form of proxy by 5:00 p.m. (Toronto time) on May 28, 2021 or, if the Meeting is adjourned, 48 hours (excluding Saturdays, Sundays and holidays) before any adjournment of the Meeting.

What’s the difference between registered and non-registered (beneficial) Shareholders?

The voting process is different depending on whether you are a registered or non-registered (beneficial) Shareholder:

Registered Shareholders

You are a registered Shareholder if your name appears on your Share certificate or in the registers of the Corporation maintained by Computershare. Your form of proxy tells you whether you are a registered Shareholder. We mail copies of the Notice of Meeting, this Proxy Statement and the form of proxy (collectively, the “proxy materials”) directly to registered Shareholders. We have previously mailed our annual report to all registered Shareholders.

Non-Registered (or Beneficial) Shareholders

You are a non-registered (or beneficial) Shareholder if your bank, trust company, securities broker or other financial institution holds your Shares for you (as your nominee). For most of you, your voting instruction form or proxy tells you whether you are a non-registered (or beneficial) Shareholder.

In accordance with Canadian securities law and SEC rules, we have distributed copies of the proxy materials and the annual report to CDS Clearing and Depository Services Inc. (“CDS”) and intermediaries (such as securities brokers or financial institutions) for onward distribution to those non-registered or beneficial Shareholders to whom we have not sent the proxy materials and the annual report directly.

The intermediaries are required to forward proxy materials and the annual report to non-registered or beneficial Shareholders unless a non-registered or beneficial Shareholder has waived the right to receive them. Very often, intermediaries will use a service company such as Broadridge Investor Communication Solutions to forward the proxy materials to non-registered or beneficial Shareholders.

How do I vote?

Most non-registered or beneficial Shareholders who have not waived the right to receive proxy materials will receive a voting instruction form (“VIF”). Registered Shareholders will, and some non-registered (beneficial) Shareholders may receive a form of proxy. Shareholders should follow the additional procedures set out below, depending on what type of form they receive. Detailed instructions regarding shareholders’ voting process are also available on the Investors page of our website at <https://www.aptose.com/investors/news-events/ir-calendar>.

1. Voting Instruction Form. If the non-registered Shareholder does not wish to attend and vote at the Meeting (or have another person attend and vote on the non-registered Shareholder’s behalf), the voting instruction form must be completed, signed and returned in accordance with the directions on the form, so that the intermediary may vote on the non-registered Shareholder’s behalf.

If a non-registered Shareholder wishes to attend and vote at the Meeting (or have another person attend and vote on the non-registered Shareholder’s behalf), the non-registered Shareholder must complete, sign and return the VIF in accordance with the directions provided. If the non-registered Shareholder wishes to attend and vote at the Meeting, they must appoint themselves as proxyholder. Otherwise, the non-registered Shareholder will only be able to attend the Meeting as a “Guest”, and will not be able to vote or ask questions at the Meeting. Non-registered Shareholders should visit our website at <https://www.aptose.com/investors/news-events/ir-calendar> to obtain additional instructions on how to vote online during the Meeting.

Non-registered Shareholders who wish to appoint themselves as a proxy holder in order to attend the Meeting virtually or who wish to appoint a proxyholder other than a management representative to represent them at the online Meeting must submit their VIF prior to registering themselves or their proxyholder, as applicable. Registering themselves or the proxyholder, as applicable, is an additional step once a non-registered Shareholder has submitted their VIF. Failure to register themselves or another person other than a management representative as duly appointed proxyholder will result in the non-registered Shareholder or the proxyholder not receiving a Username to participate in the Meeting. To register a proxyholder (be it themselves or another person other than a management representative), non-registered Shareholders must visit <https://www.computershare.com/aptose> by 5:00 p.m. (Toronto time) on May 28, 2021 or, if the Meeting is adjourned, 48 hours (excluding Saturdays, Sundays and holidays) before any adjournment of the Meeting, and provide Computershare with their information or their proxyholder’s contact information, as applicable, so that Computershare may provide them or the proxyholder, as applicable, with a Username via email. Without a Username, non-registered Shareholders who appointed themselves as proxyholders and proxyholders will only be able to attend the Meeting as “Guests” and will not be able to vote or ask questions at the Meeting.

Or

2. Form of Proxy. A registered Shareholder will receive a form of proxy to be completed, signed and returned in accordance with the directions on the form, if the registered Shareholder does not wish to attend and vote at the Meeting virtually (or have another person attend and vote on the registered Shareholder's behalf).

Registered Shareholders who wish to appoint a proxyholder other than a management representative to represent them at the online Meeting must submit their form of proxy prior to registering their proxyholder. Registering the proxyholder is an additional step once a registered Shareholder has submitted their proxy. Failure to register a duly appointed proxyholder will result in the proxyholder not receiving a Username to participate in the Meeting. To register a proxyholder, registered Shareholders must visit <https://www.computershare.com/aptose> by 5:00 p.m. (Toronto time) on May 28, 2021 or, if the Meeting is adjourned, 48 hours (excluding Saturdays, Sundays and holidays) before any adjournment of the Meeting, and provide Computershare with their proxyholder's contact information, so that Computershare may provide the proxyholder with a Username via email. Without a Username, proxyholders will only be able to attend the Meeting as "Guests" and will not be able to vote or ask questions at the Meeting.

Registered Shareholders may also attend and vote at the Meeting. Registered Shareholders should visit our website at <https://www.aptose.com/investors/news-events/ir-calendar> to obtain additional instructions on how to vote online during the Meeting. The 15-digit control number provided on the registered Shareholder's form of proxy will be required.

Less frequently, a non-registered Shareholder will receive, as part of the proxy materials, a form of proxy that has already been signed by the intermediary (typically by a facsimile or stamped signature), which is restricted as to the number of Shares beneficially owned by the non-registered Shareholder but which is otherwise uncompleted. If the non-registered Shareholder does not wish to attend and vote at the Meeting (or have another person attend and vote on the non-registered Shareholder's behalf), the non-registered Shareholder must complete the form of proxy and deposit it with Computershare, 100 University Avenue, 8th Floor, Toronto, Canada, M5J 2Y1 as described above.

If a non-registered Shareholder wishes to attend and vote at the Meeting (or have another person attend and vote on the non-registered Shareholder's behalf), the non-registered Shareholder must strike out the names of the persons named in the proxy and insert the non-registered Shareholder's (or such other person's) name in the blank space provided. The non-registered Shareholder must then register themselves or the other person, as applicable, as proxyholder. Registering themselves or the other person, as applicable, is an additional step once a non-registered Shareholder has submitted their completed form of proxy. Failure to register themselves or the other person, as applicable, as duly appointed proxyholder will result in the non-registered Shareholder or the proxyholder, as applicable, not receiving a Username to participate in the Meeting. To register a proxyholder (be it themselves or another person), non-registered Shareholders must visit <https://www.computershare.com/aptose> by 5:00 p.m. (Toronto time) on May 28, 2021 or, if the Meeting is adjourned, 48 hours (excluding Saturdays, Sundays and holidays) before any adjournment of the Meeting, and provide Computershare with their information or their proxyholder's contact information, as applicable, so that Computershare may provide them or the proxyholder, as applicable, with a Username via email. Without a Username, non-registered Shareholders who appointed themselves as proxyholders and proxyholders will only be able to attend the Meeting as "Guests" and will not be able to vote or ask questions at the Meeting.

3. United States non-registered (beneficial) Shareholders. If a non-registered Shareholder in the United States wishes to attend and vote at the Meeting, they must first obtain a valid legal proxy from their broker, bank or other agent and then register in advance to attend the Meeting. The U.S. non-registered Shareholder should follow the instructions from their broker or bank included with these proxy materials, or contact their broker or bank to request a legal form of proxy. After first obtaining a valid legal proxy from their broker, bank or other agent, the U.S. non-registered Shareholder must then register to attend the Meeting by submitting a copy of their legal proxy to Computershare. Requests for registration should be directed to:

Computershare
100 University Avenue
8th Floor
Toronto, Ontario
M5J 2Y1

OR

Email at: uslegalproxy@computershare.com

Requests for registration must be labeled as “Legal Proxy” and be received no later than by 5:00 p.m. (Toronto time) on May 28, 2021. U.S. non-registered Shareholders will receive a confirmation of their registration by email receipt of their registration materials by Computershare. U.S. non-registered Shareholders will then be able to attend the Meeting and vote and ask questions at <https://web.lumiagm.com/408550733>. U.S. non-registered Shareholders are required to register their appointment at www.computershare.com/appointee. If U.S. non-registered Shareholders do not follow the procedures set out above, they will only be able to attend the Meeting as “Guests” and will not be able to vote or ask questions at the Meeting.

Shareholders should follow the instructions on the forms they receive, and non-registered Shareholders should contact their intermediaries promptly if they need assistance.

How do I request a copy of proxy materials?

To request a printed copy of the proxy materials, please contact your broker, if you are a non-registered Shareholder, or if you are a registered Shareholder, contact our Chief Financial Officer at Aptose Biosciences Inc., Suite 120, 12770 High Bluff Drive, San Diego, California, telephone: 858-926-2730.

The proxy materials are being sent or made available to both registered and non-registered owners of Shares. The Corporation is sending proxy materials indirectly to non-objecting beneficial owners (as defined in National Instrument 54-101 - *Communication with Beneficial Owners of Securities of a Reporting Issuer* (“NI 54-101”)). The Corporation intends to pay for intermediaries to forward to objecting beneficial owners (as defined in NI 54-101) the proxy materials.

What am I voting on at the Meeting?

The following items of business will be covered at the Meeting:

1. receiving the financial statements of the Corporation for the fiscal year ended December 31, 2020, including the auditor’s report thereon;
2. Proposal No. 1 – electing seven directors to serve until the 2022 Annual Meeting of Shareholders;

3. Proposal No. 2 – appointing KPMG LLP as the independent registered public accounting firm of the Corporation for the fiscal year ending December 31, 2021;
4. Proposal No. 3 – passing an ordinary resolution authorizing the adoption of the Corporation’s 2021 stock incentive plan;
5. Proposal No. 4 – passing an ordinary resolution authorizing the adoption of the Corporation’s 2021 employee stock purchase plan;
6. Proposal No. 5 – passing an advisory (non-binding) resolution on the compensation of the Corporation’s named executive officers;
7. Proposal No. 6 – passing an advisory (non-binding) resolution on the frequency of future “say on pay” votes; and
8. transacting such other business as may be properly brought before the Meeting.

As of the date of this Proxy Statement, the Board of Directors (the “Board”) is not aware of any such other business.

How does the Board recommend that I vote?

Our Board recommends that each Shareholder vote “**FOR**” each of Proposals No. 1 through No. 5, and choose “**1 Year**” for Proposal No. 6.

What votes may I cast with regard to each proposal?

You can choose to vote “For” or “Withhold” for Proposal No. 1, “For”, “Against” or “Abstain”, for Proposals No. 2 through No. 5 and “1 Year”, “2 Years” or “3 Years” for Proposal No. 6. The Shares represented by the form of proxy will be voted in accordance with the instructions of the Shareholder on any ballot that may be called for and, if the Shareholder specifies a choice with respect to any matter to be acted upon, the Shares will be voted accordingly.

If you return your form of proxy and do not tell us how you want to vote your Shares, your Shares will be voted in accordance with Board recommendations for each proposal by the management representatives named in the Proxy Statement.

The enclosed form of proxy confers discretionary authority upon the management representatives designated in the form of proxy with respect to amendments to or variations of matters identified in the Notice of Meeting and with respect to other matters that may properly come before the Meeting. At the date of this Proxy Statement, management of the Corporation knows of no such amendments, variations or other matters.

What vote is required in order to approve each proposal?

- Proposal No. 1: Under our Majority Voting Policy, which is a “plurality-plus” voting standard, a director nominee who is elected in an uncontested election with a greater number of votes “Withheld” than votes “For” will be considered by the Board not to have received the support of the Shareholders, even though duly elected as a matter of corporate law. Such a nominee will be expected to provide forthwith his or her resignation to the Board, effective on acceptance by the Board. Unless special circumstances apply, the Board will accept the resignation. Within ninety

(90) days following the applicable meeting of the Shareholders, the Board will determine whether to accept or reject the resignation offer that has been submitted. Following the Board's decision on the resignation, the Board will promptly disclose, via press release, its decision (including the reasons for rejecting the resignation offer, if applicable).

- Proposal No. 2: The appointment of KPMG LLP as our independent registered public accounting firm requires a majority of the votes cast at the Meeting, and votes cast only include those votes cast "For" or "Against" the proposal.
- Proposal No. 3: The adoption of the Corporation's 2021 Stock Incentive Plan requires a majority of the votes cast at the Meeting, and votes cast only include those votes cast "For" or "Against" the proposal.
- Proposal No. 4: The adoption of the Corporation's employee stock purchase plan requires a majority of the votes cast at the Meeting, and votes cast only include those votes cast "For" or "Against" the proposal.
- Proposal No. 5: The approval of the advisory (non-binding) resolution on the compensation of the Corporation's named executive officers requires a majority of the votes cast at the Meeting, and votes cast only include those votes cast "For" or "Against" the proposal. Abstentions and broker non-votes will not be included in the total votes cast and will not affect the results.
- Proposal No. 6: You may select "1 Year", "2 Years," "3 Years" or "Abstain" with respect to Proposal No. 6. You are not voting to approve or disapprove the Board's recommendation on Proposal No. 6. The selection that receives the greatest number of votes cast at the Meeting will be deemed to have received the recommendation of the Shareholders and the vote will not be binding on the Board. Abstentions and broker non-votes will not be included in the total votes cast and will not affect the results.

What impact does a "Withhold" or "Abstain" vote have?

- Proposal No. 1: If you select "Withhold" with respect to the election of a nominee, your vote will have no effect on the votes cast for the purposes of electing such nominee but will be considered in the application of our Majority Voting Policy which is described above.
- Proposals No. 2 through 6: If you select "Abstain," your vote will have no effect on the votes cast for the purposes of approving such proposal.

What is the effect if I do not cast my vote?

If as a registered Shareholder you do not cast your vote at the Meeting or by proxy, no votes will be cast on your behalf on any of the proposals.

If you are a U.S. beneficial shareholder with an intermediary, you must instruct your U.S. intermediary how to vote your shares. If, as a U.S. non-registered or beneficial Shareholder, you do not instruct your intermediary on how to vote on any of the proposals at the Meeting, the intermediary has discretionary authority to vote your shares on Proposal No. 2, but the intermediary does not have discretionary authority to vote your shares on Proposal No. 1, Proposals No. 3 through No. 6 or any unusual item, so a "broker non-vote" will be recorded with respect to such item. Broker non-votes will be treated

as not entitled to vote on any such matter and will not be counted as having been voted in respect of any such matter. Shares represented by such broker “non-votes” will, however, be counted in determining whether there is a quorum for the Meeting.

How do I change my vote?

A registered Shareholder who has given a proxy may revoke that proxy and change a vote by:

- (a) completing and signing a proxy bearing a later date and depositing it with Computershare as described above;
- (b) depositing an instrument in writing executed by the Shareholder or by the Shareholder’s attorney authorized in writing at our registered office at any time before 5:00 p.m. (Toronto time) on May 31, 2021, or on the last business day before any adjournment of the Meeting at which the proxy is to be used;
- (c) using your 15-digit control number and voting online at the Meeting; or
- (d) in any other manner permitted by law.

A non-registered or beneficial Shareholder may revoke a voting instruction form or a waiver of the right to receive proxy materials and to vote given to an intermediary or to the Corporation, as the case may be, at any time by written notice to the intermediary or the Corporation, except that neither an intermediary nor the Corporation is required to act on a revocation of a voting instruction form or on a waiver of the right to receive materials and to vote that is not received by such intermediary or the Corporation, at least seven days prior to the Meeting.

What does it mean if I receive more than one set of proxy materials?

This means that you own Shares that are registered under different accounts. For example, you may own some Shares directly as a registered Shareholder and other Shares as a non-registered beneficial Shareholder through an intermediary, or you may own Shares through more than one such organization. In these situations, you will receive multiple sets of proxy materials. It is necessary for you to complete and return all forms of proxy and VIFs in order to vote all of the Shares you own. Please make sure you return each form of proxy or VIF in the accompanying return envelope. You may also vote by Internet, telephone, facsimile or email, as applicable, by following the instructions on your proxy materials.

How will proxies be solicited and who will pay the cost of the proxy solicitation?

The solicitation of proxies will be primarily by mail, but Aptose’s directors, officers and regular employees may also solicit proxies personally or by telephone. Aptose will bear all costs of the solicitation, including the printing, handling and mailing of the Meeting materials. Aptose has arranged for intermediaries to forward the Meeting materials to non-registered or beneficial Shareholders of record, and Aptose may reimburse the intermediaries for their reasonable fees and disbursements in that regard.

We have engaged Equiniti (US) Services LLC to help us solicit proxies from shareholders for a fee of \$15,000 plus reimbursement for out-of-pocket expenses.

How can I make a Shareholder proposal for the 2022 Annual General Meeting?

If you want to propose a matter for consideration at our 2022 Annual General Meeting, and for

inclusion in the proxy statement, then that proposal must be received at our registered office at 251 Consumers Road, Suite 1105, Toronto, ON M2J 4R3 by January 20, 2022. For a proposal to be valid, it must comply with the *Canada Business Corporations Act* (the “CBCA”) and the *Securities Exchange Act of 1934* (United States) (the “Exchange Act”).

In order for a Shareholder proposal to be eligible under the CBCA, it must be in writing, accompanied by the requisite declarations and signed by the submitter and qualified Shareholders who at the time of signing are the registered or beneficial owners of Shares that, in the aggregate: (a) constitute at least 1% of our issued Shares that have the right to vote at general meetings; or (b) have a fair market value in excess of CA\$2,000. For the submitter or a qualified Shareholder to be eligible to sign the proposal, that Shareholder must have been the registered or beneficial owner of our Shares that carry the right to vote at general meetings for an uninterrupted period of at least six months before the date the proposal is submitted.

In order for a Shareholder proposal to be eligible for inclusion in the proxy statement under the Exchange Act, the Shareholder must submit the proposal in accordance with Rule 14a-8, and the Shareholder must have continuously held at least US\$2,000 in market value of the Shares entitled to be voted on the proposal at the meeting, for at least one year by the date the Shareholder submits the proposal. The Shareholder must continue to hold those Shares through the date of the meeting.

A Shareholder wishing to nominate an individual to be a director, other than pursuant to a requisition of a meeting made pursuant to the CBCA or a Shareholder proposal made pursuant to the CBCA provisions described above, is required to comply with Section 3.1 of the Advance Notice Bylaw. Section 3.1 of the Advance Notice Bylaw provides, *inter alia*, that proper written notice of any such director nomination (the “Nomination Notice”) for an annual general meeting of Shareholders must be provided to the Secretary of the Corporation not less than 30 days prior to the date of the annual general meeting of Shareholders; provided, however, that in the event that the annual general meeting of Shareholders is to be held on a date that is less than 50 days after the date (the “Notice Date”) on which the first public announcement of the date of the annual general meeting was made, the Nomination Notice must be provided no later than the close of business on the tenth day following the Notice Date. The foregoing is merely a summary of provisions contained in Section 3.1 of the Advance Notice Bylaw, and is not comprehensive and is qualified by the full text of such provisions. The full text of such provisions is set out in Section 3.1 of the Advance Notice Bylaw, a copy of which is filed under the Corporation’s profile at www.sedar.com or www.sec.gov. For such Shareholder’s director nominee to be eligible for inclusion in the proxy statement, however, such nomination must be received by our registered office by January 20, 2022.

What if amendments are made to the proposals or if other matters are brought before the Meeting?

With respect to any amendments or variations in any of the proposals shown in the Proxy Statement, or any other matters which may properly come before the Meeting, the Shares will be voted by the appointed proxyholder as he or she in their sole discretion sees fit.

As of the date of this Proxy Statement, the Board is not aware of any such amendments, variations or other matters to come before the Meeting. However, if any such changes that are not currently known to the Board should properly come before the Meeting, the Shares represented by your proxyholders will be voted in accordance with the best judgment of the proxyholders.

Who will tabulate the votes?

We currently expect that Computershare and Lumi will tabulate the votes, and our Corporate Secretary will be our inspector of elections for the Meeting.

When will voting results be disclosed?

Preliminary voting results will be announced at the Meeting. Final voting results will be filed with the Canadian provincial securities regulatory authorities on SEDAR at www.sedar.com promptly following the Meeting, and will also be published in a Current Report on Form 8-K filed with the SEC on EDGAR at <https://www.sec.gov> within four business days of the Meeting.

Whom do I contact if I have questions regarding the Meeting?

If you have any questions or require assistance in voting your Shares, please call Dr. Jotin Marango, Chief Business and Strategy Officer and Corporate Secretary, at 858-926-2730.

Who may adjourn the Meeting?

The Meeting may be adjourned to any other time and any other place by the Shareholders who attend the Meeting or who are represented at the Meeting and entitled to vote even when such Shareholders do not constitute a quorum.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Proxy Statement contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Exchange Act, and are subject to the safe harbor created by those sections. This Proxy Statement also contains “forward-looking information” within the meaning of applicable Canadian securities laws. We refer to such forward-looking statements and forward-looking information collectively as “forward-looking statements”. We have identified some of these forward-looking statements with words like “believe,” “may,” “could,” “would,” “might,” “possible,” “potential,” “will,” “should,” “expect,” “intend,” “plan,” “predict,” “anticipate,” “estimate,” “contemplate” and “continue”, the negative of these words, other words and terms of similar meaning and the use of future dates. Forward-looking statements involve risks and uncertainties. These uncertainties include factors that affect all businesses as well as matters specific to us.

Forward-looking statements by their nature address matters that are, to different degrees, uncertain. Uncertainties and risks may cause our actual results to be materially different than those expressed in or implied by our forward-looking statements. For us, particular uncertainties and risks include those described in our filings with the Securities and Exchange Commission (the “SEC”), including our most recent Annual Report on Form 10-K for the year ended December 31, 2020. A copy of this document can be found by accessing the SEC’s EDGAR filing database at www.sec.gov and on SEDAR at www.sedar.com; however we will promptly provide a copy of this document to any Shareholder of the Corporation free of charge upon request. All forward-looking statements in this Proxy Statement speak only as of the date of this Proxy Statement and are based on our current beliefs and expectations. We undertake no obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as otherwise required by law.

VOTING SECURITIES AND PRINCIPAL HOLDERS OF VOTING SECURITIES

As of the record date April 19, 2021, 88,943,243 Shares are issued and outstanding. Each holder of Shares of record at the close of business on April 19, 2021 will be entitled to one vote for each Share held on all matters proposed to come before the Meeting, except to the extent that the Shareholder has transferred any Shares after the record date and the transferee of such Shares establishes ownership of them and makes a written demand, not later than 10 days prior to the Meeting, to be included in the list of Shareholders entitled to vote at the Meeting, in which case the transferee will be entitled to vote such Shares.

**SHARE OWNERSHIP OF CERTAIN BENEFICIAL OWNERS,
MANAGEMENT AND DIRECTORS**

The table below sets forth information known to us regarding the beneficial ownership of our Shares as of April 20, 2021 for:

- each person the Corporation believes beneficially holds more than 5% of the outstanding shares of our Shares based solely on our review of SEC filings;
- each of our directors and nominees for directors;
- each of the named executive officers named in the Summary Compensation Table (we collectively refer to these persons as our “Named Executive Officers”); and
- all of our directors and executive officers as a group.

The number of Shares beneficially owned by a person includes shares subject to options held by that person that are currently exercisable or that become exercisable within 60 days of April 20, 2021. Percentage calculations assume, for each person and group, that all Shares that may be acquired by such person or group pursuant to options currently exercisable or that become exercisable within 60 days of April 20, 2021 are outstanding for the purpose of computing the percentage of Shares owned by such person or group. However, such unissued Shares described above are not deemed to be outstanding for calculating the percentage of Shares owned by any other person.

Except as otherwise indicated, the persons in the table below have sole voting and investment power with respect to all Shares shown as beneficially owned by them, subject to community property laws where applicable and subject to the information contained in the notes to the table.

Name of Beneficial Owner	Amount and Nature of Beneficial Ownership ⁽¹⁾	Percent of Class
<i>Named Executive Officers and Directors</i>		
Carol G. Ashe	141,250	*
Dr. Rafael Bejar	300,000	*
Dr. Denis Burger	306,755	*
Gregory K. Chow	1,937,014	2.18%
Caroline Loewy	147,500	*
Dr. Jotin Marango	529,554	*
Dr. Erich Platzer	387,500	*
Dr. William G. Rice	3,169,489	3.56%
Mark D. Vincent	287,583	*
Warren Whitehead	273,750	*
All Executive Officers and Directors as a Group (ten persons)	7,480,395	8.41%
Beneficial Owners of More Than 5%		
Nantahala Capital Management, LLC ⁽²⁾	7,272,673	8.18%
DRW Holdings, LLC ⁽³⁾	7,976,176	8.97%
OrbiMed Capital LLC ⁽⁴⁾	8,030,000	9.03%
*Does not exceed one percent of common shares outstanding		

<p>(1) Includes for the persons listed below the following Shares subject to options held by such persons that are currently exercisable or become exercisable within 60 days of April 20, 2021: Ms. Carol G. Ashe: 141,250; Dr. Rafael Bejar: 300,003; Dr. Denis Burger: 290,501; Mr. Gregory K. Chow: 1,704,168; Ms. Caroline Loewy: 147,500; Dr. Jotin Marango: 413,355; Dr. Erich Platzer: 252,500; Dr. William G. Rice: 2,871,966; Dr. Mark Vincent: 281,083; and Mr. Warren Whitehead: 233,750.</p>
<p>(2) Based on information contained in a schedule 13G filed with the SEC on February 12, 2021 by Nantahala Capital Management, LLC, Wilmot B. Harkey and Daniel Mack, 130 Main St. 2nd Floor, New Canaan, CT, 06840, United States of America. The filing indicates that, as of December 31, 2020, Nantahala Capital Management, LLC may be deemed to be the beneficial of 7,272,673 shares held by funds and separately managed accounts under its control, and as the managing members of Nantahala Capital Management, LLC, each of Wilmot B. Harkey and Daniel Mack may be deemed to be a beneficial owner of those shares.</p>
<p>(3) Based on information contained in a schedule 13G filed with the SEC on February 1, 2021 by DRW Investments, LLC, DRW Commodities, LLC, DRW Securities, LLC, DRW Holdings, LLC, Donald R. Wilson, Jr., 540 West Madison Street, Suite 2500, Chicago, Illinois 60661, United States of America. The filing indicates that, as of December 31, 2020, each of DRW Holdings, LLC and Donald R. Wilson, Jr. could be deemed to beneficially own the 7,972,014 shares beneficially owned by DRW Investments, LLC and the 4,162 shares beneficially owned by DRW Commodities, LLC.</p>
<p>(4) Based on information contained in a schedule 13G filed with the SEC on February 12, 2021 by OrbiMed Capital LLC, 601 Lexington Avenue, 54th Floor, New York, NY 10022, United States of America. The filing indicates that, as of December 31, 2020, OrbiMed Capital LLC is holding 8,030,000 shares on behalf of other persons who have the right to receive or the power to direct the receipt of dividends from, or proceeds from the sale of, such securities. No one such other person's interest in the securities whose ownership is reported here relates to more than five percent of the class. OrbiMed Capital LLC exercises investment and voting power over the shares through a management committee comprised of Carl L. Gordon, Sven H. Borho, and Jonathan T. Silverstein, each of whom disclaims beneficial ownership of the shares.</p>

RECEIPT OF FINANCIAL STATEMENTS

At the Meeting, Shareholders will receive and consider the financial statements of the Corporation for the fiscal year ended December 31, 2020 and the auditor's report thereon, but no vote by the Shareholders with respect thereto is required or proposed to be taken.

PROPOSAL NO. 1—ELECTION OF DIRECTORS

Pursuant to the articles of the Corporation, the number of directors of the Corporation is set at a minimum of three and a maximum of eleven, and the Board is authorized to determine the actual number of directors to be elected from time to time. The Corporation currently has seven directors, all of whom are being proposed for nomination at the Meeting. Unless they resign, all directors elected at the Meeting will hold office until our next annual meeting of Shareholders or until their successors are elected or appointed.

On February 24, 2014, the Board adopted a majority voting policy (the "Majority Voting Policy", also known as a "plurality-plus" standard). The Majority Voting Policy applies to this election of directors. Under such policy, a director nominee who is elected in an uncontested election with a greater number of votes "Withheld" than votes "For" will be considered by the Board not to have received the support of the Shareholders, even though duly elected as a matter of corporate law. Such a nominee will be expected to provide forthwith his or her resignation to the Board, effective on acceptance by the Board. Unless special circumstances apply, the Board will accept the resignation. Within 90 days following the applicable meeting of the Shareholders, the Board will determine whether to accept or reject the resignation offer that has been submitted. Following the Board's decision on the resignation, the Board will promptly disclose, via press release, its decision (including the reasons for rejecting the resignation offer, if applicable).

The following incumbent directors of the Corporation are nominated for election at the Meeting.

Director	Experience and Qualifications
<p>Carol G. Ashe⁽²⁾⁽³⁾ Pennsylvania, United States Director Since August 2018</p>	<p>Ms. Ashe, age, 63, has been the Chief Business Officer at the New York Genome Center, an independent, non-profit academic research institution focused on furthering genomic research that leads to scientific advances and new insights and therapies for patients with neurodegenerative disease, neuropsychiatric disease, and cancer, since 2014. Previously, she served as Vice President of Corporate Development for Endo Pharmaceutical’s branded, generic and platform drug delivery pharmaceutical business units from 2011 to 2013; a Partner at SR One, the corporate venture capital fund of GlaxoSmithKline (“GSK”), from 2008 to 2010; and head of GSK’s US Corporate Legal Group supporting US-based mergers, acquisitions and equity investments from 2007 to 2008. Prior to that, Ms. Ashe led GSK’s global Business Development Transactions Legal Team supporting both the pharmaceutical and consumer healthcare business units from 1995 to 2007. In 2020, Ms. Ashe joined the Board of Elicio Therapeutics, a privately held next generation immunotherapy company, as an independent director. Ms. Ashe received her BS degree in Biology from Pennsylvania State University, her law degree from Villanova University School of Law and is a registered patent attorney.</p>
<p>Dr. Denis Burger⁽¹⁾⁽²⁾⁽⁴⁾ Oregon, United States Director Since 2007</p>	<p>Ms. Ashe makes valuable contributions to the Board based on over 25 years of experience in the pharmaceutical and biotechnology industry in business development and as legal counsel for business development transactions and patent matters.</p> <p>Dr. Burger, age 77, co-founded Trinity Biotech, PLC, a diagnostic biotechnology company based in Dublin, Ireland, in 1992, served as Chairman from 1992 to 1995, and now serves as lead director on its board of directors. Dr. Burger served as the Chairman, Chief Executive Officer and a Director of AVI Biopharma Inc., an Oregon-based biotechnology company, from 1996 to 2007. Dr. Burger has also been the sole member of Paradigm Ventures LLC, a healthcare consulting and funding firm based in Portland, Oregon, since 1990. He was a co-founder and Chairman of Epitope Inc. from 1981 to 1990. Dr. Burger was Vice Chairman and Chief Scientific Officer of CytoDyn Inc. from 2016 to 2018. Dr. Burger has served as President of Yamhill Valley Vineyards since 1983. In addition, Dr. Burger previously held a professorship in the Department of Microbiology and Immunology and Surgery (Surgical Oncology) at the Oregon Health Sciences University in Portland. Dr. Burger received his M.Sc. and Ph.D. in Microbiology and Immunology from the University of Arizona.</p> <p>Dr. Burger serves on the board of directors of Trinity Biotech, PLC. (1992 to present)* and previously served on the board of directors of CytoDyn Inc. (2014 to 2018)*.</p> <p>Dr. Burger makes valuable contributions to the Board based on his Ph.D. in microbiology and immunology, and his more than 25 years of experience in the biotechnology industry as a senior executive and as a corporate director.</p>
<p>Caroline M. Loewy⁽¹⁾⁽³⁾ California, United States Director Since April 2018</p>	<p>Ms. Loewy, age 55, co-founded and served as Chief Financial Officer and Chief Business Officer of Achieve Life Sciences, Inc., a clinical-stage pharmaceutical company, from 2015 to 2017. Prior to that, she held the position of Chief Financial Officer of both public and private biopharmaceutical companies including Tobira Therapeutics, Inc. from 2012 to 2014, Corcept Therapeutics Incorporated from 2008 to 2011, and Poniard Pharmaceuticals, Inc. from 2006 to 2008. Ms. Loewy also spent 11 years as a senior biotechnology equity research analyst at Morgan Stanley and Prudential Securities. She is a founding board member of the Global Genes Project, one of the leading rare disease patient advocacy organizations in the world, and of the KCNQ2 Cure Alliance Foundation. Ms. Loewy holds a BA degree from the University of California, Berkeley, and an MBA/MS degree from Carnegie Mellon</p>

Director	Experience and Qualifications
	<p>University.</p> <p>Ms. Loewy serves on the boards of directors of CymaBay Therapeutics Inc. (2016 to present)* PhaseBio Pharmaceuticals Inc. (2018 to present)*, and Zogenix, Inc. (2020 to present)*.</p> <p>Ms. Loewy makes valuable contributions to the Board based on more than 25 years of experience in assessing and accelerating biotechnology product development and growth and her financial expertise as a chief financial officer.</p>
<p>Dr. Erich Platzer⁽²⁾ Basel, Switzerland Director Since 2014</p>	<p>Dr. Platzer, age 70, served as a board certified physician in internal medicine, hematology and medical oncology between 1979 and 1991. In 2001, Dr. Platzer co-founded HBM Healthcare Investments (formerly HBM BioVentures), a global leader in healthcare investing and served as their investment advisor until 2015. Previously, he served as the business director of oncology, as well as the global strategic marketing and therapeutic area head of oncology at Roche, Basel. He also served in various other leadership roles at Roche and was responsible for various strategic corporate partnerships. He has over 12 years of experience in academic medicine and research and was a key member of the team at MSKCC that purified human G-CSF in 1983 (recombinant form: Neupogen®). He earned his M.D. from the Medical School of the University of Erlangen, where he also received his “Dr. med. habil.” (M.D., Ph.D.).</p> <p>Dr. Platzer has served as a pharmaceutical industry expert on the board of directors of multiple biotech companies in both the U.S. and Europe. Currently he serves as chairman of Vivoryon Therapeutics NV, AOT, and Léman Micro Devices, as well as a board member of Peripal and as a director and industry partner of MedTech Innovation Partners, MTIP, a Swiss VC firm focusing on MedTech and eHealth. He has also served as the president of Swiss business angel group StartAngels since 2015.</p> <p>Dr. Platzer makes valuable contributions to the Board based on over twenty-five years’ experience in the biotechnology industry, as a physician in hematology and medical oncology, as a corporate executive, and as a corporate director.</p>
<p>Dr. William G. Rice California, United States Director Since 2013</p>	<p>Dr. Rice, age 62, joined Aptose as Chairman and Chief Executive Officer in October 2013. Prior to joining Aptose, Dr. Rice served as the President, Chief Executive Officer and Chairman of the board of Cylene Pharmaceuticals, Inc., a private biotechnology company from 2003 to 2013. Prior to Cylene, Dr. Rice was the founder, President, Chief Executive Officer and Director of Achillion Pharmaceuticals, Inc. from 1998 to 2003. He also served as Senior Scientist and Head of the Drug Mechanism Laboratory at the National Cancer Institute-Frederick Cancer Research and Development Center from 1992 to 1998, and served as a faculty member in the division of Pediatric Hematology and Oncology at Emory University School of Medicine from 1989 to 1992. Dr. Rice received his Ph.D. from Emory University Department of Biochemistry.</p> <p>Dr. Rice continues to serve as the Chairman of the board of Cylene and is a member of the board of directors of Oncolytics Biotech Inc. (2015 to present)*.</p> <p>Dr. Rice makes valuable contributions to the Board based on his Ph.D. in Biochemistry, and his over 25 years of experience in the biotechnology industry as a senior executive and as a corporate director.</p>
<p>Dr. Mark D. Vincent⁽³⁾ Ontario, Canada</p>	<p>Dr. Vincent, age 68, has been a Professor of Oncology at the University of Western Ontario since 2008 and a staff medical oncologist at the London Regional Cancer Program since 1990. Dr. Vincent has also served as the co-founder and Chief</p>

Director	Experience and Qualifications
Director Since 2007	<p>Executive Officer of Sarissa, Inc., a private company actively involved in the development of compounds which potentiate existing, approved targeted drugs including agents approved in leukemia, since 2000. Dr. Vincent holds multiple patents on the potentiation of cancer chemotherapy by the manipulation of drug resistance genes, sits on the advisory boards and speakers panels of several major pharmaceutical companies, and is a frequent international lecturer on the positioning of new drugs in the complex evolving management of lung and gastro-intestinal cancer. Dr. Vincent completed his oncology training at the Royal Marsden Hospital on London, England, with a major focus on leukemia/lymphoma.</p> <p>Dr. Vincent makes valuable contributions to the Board based on over 25 years of experience as a medical oncologist.</p>
Warren Whitehead ⁽¹⁾ Ontario, Canada Director Since 2011	<p>Mr. Whitehead, age 69, served as the Chief Financial Officer of ProMIS Neurosciences Inc. (formerly Amorfix Life Sciences Ltd.) from 2013 to 2015, a TSX-listed company targeting detection and effective treatment of Alzheimer’s disease and amyotrophic lateral sclerosis. Previously, from 2006 to 2008, he was the Chief Financial Officer of Arius Research Inc., a TSX-listed company developing anti-cancer antibodies, where he provided financial guidance and leadership during the acquisition of Arius by Roche in 2008. He was also the former Chief Financial Officer of Labopharm Inc. from 2000 to 2006, where he completed a series of public equity financings, including a cross-border Nasdaq offering. Other positions include Chief Financial Officer of Resolution Pharmaceuticals Inc., and a position in finance and business development at Glaxo Canada (now GlaxoSmithKline). Mr. Whitehead holds an MBA, and BComm from the University of Windsor and a BA from the University of Western Ontario.</p> <p>Mr. Whitehead was the former Chairman and board member of Plantform Corporation and a former Board Member of Telesta Therapeutics (TSX), which was acquired by Prometic Life Sciences in 2016.</p> <p>Mr. Whitehead makes valuable contributions to the Board based on his financial expertise as a Chartered Professional Accountant (CPA) and a Certified Management Accountant (CMA) who has held chief financial officer roles at publicly traded pharmaceutical and biotechnology firms.</p>

1. Member of the Audit Committee.
2. Member of the Compensation Committee.
3. Member of the Corporate Governance and Nominating Committee.
4. Lead Director of the Corporation.

* SEC reporting issuer

No proposed director is, to the knowledge of the Corporation as at the date of the Proxy Statement, or has been, within 10 years before the date of this Proxy Statement, a director, chief executive officer or chief financial officer of any company (including Aptose) that: (i) was subject to a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under Canadian securities legislation that was in effect for a period of more than 30 consecutive days, (ii) was subject to cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under Canadian securities legislation that was in effect for a period of more than 30 consecutive days that was issued after the proposed director ceased to be a director, chief executive officer or chief

financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer, (iii) while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets, or (iv) become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromised with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the proposed director.

Moreover, no proposed director of the Corporation has been subject, to the knowledge of the Corporation, to (i) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority, or (ii) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable securityholder in deciding whether to vote for a proposed director.

Board Recommendation

The Board recommends a vote FOR the election of all nominees for directors named in this Proxy Statement.

CORPORATE GOVERNANCE

Corporate governance relates to the activities of the Board, the members of which are elected by and are accountable to the Shareholders, and takes into account the role of the individual members of management who are appointed by the Board and who are charged with the day-to-day management of Aptose. The Board believes that sound corporate governance practices are essential to contributing to the effective and efficient decision-making of management and the Board and to the enhancement of Shareholder value. The Board and management believe that Aptose has a sound governance structure in place for both management and the Board. Of particular note, Aptose has:

- a Board elected annually by a Majority Voting Policy, with an established written mandate;
- standing committees composed entirely of independent directors;
- an independent Lead Director;
- annual assessments of the Board, each committee and individual directors;
- established a written Disclosure and Insider Trading Policy; and
- established a written Code of Ethics.

Each of the committee charters and the Code of Ethics can be found on the Corporation's website at <https://ir.apptose.com/corporate--governance>.

National Instrument 58-101 — *Disclosure of Corporate Governance Practices* (“NI 58-101”) and National Policy 58-201 — *Corporate Governance Guidelines* (“NP 58-201”) requires issuers, including Aptose, to disclose the corporate governance practices that they have adopted. NP 58-201 provides guidance on governance practices. The Corporation is also subject to National Instrument 52-110 – *Audit Committees* (“NI 52-110”), which has been adopted in various Canadian provinces and territories and which prescribes certain requirements in relation to audit committees.

Board Mandate

The Board has adopted a mandate in which it explicitly assumes responsibility for stewardship of the Corporation. The Board is mandated to represent the Shareholders to ensure appropriate succession planning is in place, select the appropriate chief executive officer, assess and approve the strategic direction of the Corporation, ensure that appropriate processes for risk assessment, management and internal control are in place, monitor management performance against agreed benchmarks, and assure the integrity of financial reports. A copy of the Board Mandate is attached hereto as Appendix A.

Composition and Independence of the Board

The Corporation’s Board is currently composed of seven directors, a majority (six) of whom meet the independence standards under the listing standards of Nasdaq and NI 52-110. Each year the Board reviews the composition of the Board and assesses whether a Board member is “independent”.

Director	Independence
Carol Ashe	Yes
Denis Burger	Yes
Caroline Loewy	Yes
Erich Platzer.....	Yes
William G. Rice.....	No
Mark Vincent	Yes
Warren Whitehead.....	Yes

Dr. William G. Rice, Ph.D., Chairman, President and Chief Executive Officer of the Corporation is not an independent director because of his role in the Corporation’s management team.

The following table outlines other reporting issuers where our directors serve on the board:

Director	Reporting Issuer
William G. Rice	Oncolytics Biotech Inc.
Denis Burger	Trinity Biotech plc
Caroline M. Loewy.....	CymaBay Therapeutics Inc. PhaseBio Pharmaceuticals Inc. Zogenix, Inc.
Erich Platzer.....	Vivoryon Therapeutics NV

Board Leadership

In 2014, further to the appointment of Dr. William G. Rice, Ph.D. as Chairman of the Board and Chief Executive Officer, the Corporation created the position of Lead Director to ensure that the directors have an independent leadership contact and maintain and enhance the quality of the Corporation's corporate governance practices. Dr. Denis Burger, an independent director, is currently the Lead Director. The Lead Director provides leadership to the Board in discharging its mandate and also assists the Board in discharging its stewardship function, which includes (i) satisfying itself as to the integrity of the Chief Executive Officer and the other senior officers of the Corporation and that the Chief Executive Officer and other senior officers create a culture of integrity throughout the organization; (ii) strategic planning; (iii) identifying and managing risks; (iv) succession planning; (v) adopting a disclosure policy; (vi) internal control and management information systems; and (vii) the Corporation's approach to corporate governance. In addition, the Lead Director provides advice, counsel and mentorship to the Chief Executive Officer.

Board Oversight of Risk

With regard to risk management, the Board will ensure that the business of the Corporation is conducted in compliance with applicable laws and regulations and according to the highest ethical standards; will identify and document the financial risks and other risks that the Corporation faces in the course of its business and ensure that such risks are appropriately managed; and will adopt a disclosure policy.

The Board as a whole has responsibility for risk oversight, with more in-depth reviews of certain areas of risk being conducted by the relevant Board committees that report on their deliberations to the full Board. The Board and its committees fulfill their oversight responsibilities with the support of management, whose reporting processes are designed to provide information to the Board about the identification, assessment and management of critical risks and management's risk mitigation strategies. Areas of risk evaluated include regulatory, operational, financial (accounting, liquidity and tax), legal, compensation, competitive, health, safety and reputational risks.

The standing committees of the Board oversee risks associated with their respective principal areas of focus. The Audit Committee's role includes a particular focus on the qualitative aspects of financial reporting to stockholders, on our processes for the management of business and financial risk, our financial reporting obligations and for compliance with significant applicable legal, ethical and regulatory requirements. The Audit Committee, along with management, is also responsible for developing and participating in a process for review of important financial and operating topics that present potential significant risk to the Corporation. The Compensation Committee is responsible for overseeing risks and exposures associated with our compensation programs and arrangements, including our executive and director compensation programs and arrangements, and management succession planning. The Governance and Nominating Committee oversees risks relating to our corporate governance matters and policies and director succession planning.

We recognize that a fundamental part of risk management is understanding not only the risks a company faces and what steps management is taking to manage those risks, but also understanding what level of risk is appropriate for that company. Through their involvement in setting our business strategy, the Board can assess management's appetite for risk and also determine what constitutes an appropriate level of risk for the Corporation.

We believe our current Board leadership structure is appropriate and helps ensure proper risk oversight for the Corporation. The full Board conducts general risk oversight in connection with its role in reviewing our key long-term and short-term business strategies and monitoring on an ongoing basis the implementation of our key business strategies, while our standing Board committees conduct more specific risk oversight related to their responsibilities. The Chair ensures that there is sufficient time on the Board agenda for risk management discussions.

Nomination of Directors

Directors of the Corporation are expected to bring to the Board the broadest possible knowledge and depth of experience from their chosen business or profession. Directors should evidence a demonstrated ability to deal with business, financial and social issues, both nationally and internationally. This implies a capacity to provide additional strength, diversity of views and up-to-date perceptions to the Board and its deliberations. It is the mandate of the Corporate Governance and Nominating Committee to identify and recommend qualified candidates for the Board. In assessing whether identified candidates are suitable for the Board, the Corporate Governance and Nominating Committee considers: (i) the competencies and skills considered necessary for the Board as a whole; (ii) the competencies and skills that the existing directors possess and the competencies and skills nominees will bring to the Board; and (iii) whether nominees can devote sufficient time and resources to his or her duties as a member of the Board. Potential candidates for membership on the Board will not be denied consideration by reason of race, sex, religion or affiliation with some special constituency group, nor will any candidate be selected solely for such reason.

It is the Corporate Governance and Nominating Committee's policy to consider director candidates recommended by our Shareholders in accordance with the provisions set forth in our Advance Notice By-Law, which may be accessed on our website at www.aptose.com in the Investors section. Candidates recommended by the Corporation's Shareholders will be considered by the Corporate Governance and Nominating Committee and, as stated in the Corporate Governance and Nominating Committee Charter, such candidates shall be evaluated in the same manner as all other director candidates. During 2020, we received no recommendations of director candidates from our Shareholders.

Shareholders who wish to suggest a candidate for our Board may submit a written recommendation to our Secretary at 251 Consumers Road, Suite 1105, Toronto, ON M2J 4R3 along with the Shareholder's name, setting forth, among other things:

- the name, age, and province or state, and country of residence of the proposed nominee;
- the principal occupation, business or employment of the proposed nominee, both at present and within the five years preceding the recommendation;
- the number of securities of each class of voting securities of the Corporation or its subsidiaries which are beneficially owned, or controlled or directed, directly or indirectly, by the proposed nominee as of the record date for the meeting of Shareholders (if such date shall then have been made publicly available and shall have occurred) and as of the date of such notice;
- a description of any agreement, arrangement or understanding (financial, compensation or indemnity related or otherwise) between the nominating Shareholder and the proposed nominee, or any affiliates or associates of, or any person acting jointly or in concert with the nominating Shareholder or the proposed nominee, in connection with the proposed nominee's election as director; and
- whether the proposed nominee is party to any existing or proposed relationship, agreement, arrangement or understanding with any competitor of the Corporation or its affiliates or any

other third party which may give rise to a real or perceived conflict of interest between the interests of the Corporation and the interests of the proposed nominee.

The Corporate Governance and Nominating Committee may also request that the Shareholder provide certain additional information.

For the Board to consider a candidate for nomination at the 2022 Annual Meeting, Shareholders should submit the required information to the Secretary by the date not less than 30 days before the 2022 Annual Meeting; provided, however, that if the 2022 Annual Meeting is to be held on a date that is fewer than 50 days after the date (the “**Notice Date**”) on which the first public announcement of the meeting was made, notice by the nominating Shareholder may be given not later than the close of business on the tenth day following the Notice Date.

Diversity

The Corporate Governance and Nominating Committee takes diversity, including diversity of experience, perspective and education, as well as individuals from other designated groups such as women, Aboriginal people, persons with disabilities and members of visible minorities (collectively, the “**Designated Groups**”), into consideration as part of its overall recruitment and selection process in respect of its Board and management. The Corporation does not have a formal policy on the representation of women or other members of the Designated Groups on the Board or management of the Corporation. The Board does not believe that a formal policy will necessarily result in the identification or selection of the best candidates. As such, the Corporation does not see any meaningful value in adopting a formal policy in this respect at this time as it does not believe that it would further enhance diversity, including gender diversity, beyond the current recruitment and selection process carried out by the Corporate Governance and Nominating Committee. However, the Board is mindful of the benefit of diversity on the Board and management of the Corporation and the need to maximize the effectiveness of the Board and management and their respective decision-making abilities.

The Corporate Governance and Nominating Committee believes that having a diverse Board and management team offers a depth of perspective and enhances Board and management operations. The Corporate Governance and Nominating Committee values diversity of experience, perspective, education and race, and considers the representation of women and other members of the Designated Groups, as part of its overall annual evaluation of director nominees for election or re-election as well as candidates for management positions.

In addition, in searches for new directors or officers, the Corporate Governance and Nominating Committee will consider the level of representation of women and other members of the Designated Groups on the Board and in management and this will be one of several factors used in its search process. This will be achieved through continuously monitoring the level of representation of women and other members of the Designated Groups on the Board and in management positions and, where appropriate, recruiting qualified candidates who are members of the Designated Groups as part of the Corporation’s overall recruitment and selection process to fill Board or management positions, as the need arises, through vacancies, growth or otherwise.

The Board has not adopted targets regarding the representation of women and other members of Designated Groups on the Board and in executive officer positions due to the small size of the Corporation and the need to consider a balance of criteria in each individual appointment. It is important that each appointment to the Board or in executive officer positions be made, and be perceived as being made, on the merits of the individual and the needs of the Corporation at the relevant time. In addition, targets based on

specific criteria such as gender or race, could limit the Board's ability to ensure that the overall composition of the Board or management of the Corporation meets the needs of the Corporation.

Currently, two out of seven (29%) members of the Board and none of the executive officers are women. There are otherwise no members of the Board or executive officers of the Corporation who self-identify as being part of any of the Designated Groups.

Director Term Limits and Other Mechanisms of Board Renewal

The Board has not adopted term limits for directors or other mechanisms of board renewal at this time as it believes that the imposition of director term limits or other mechanisms of board renewal on a board implicitly discounts the value of experience and continuity amongst the board members and runs the risk of excluding experienced and potentially valuable board members as a result of arbitrary determination. The Board believes that it can best strike a balance between continuity and fresh perspectives without mandated term limits or other mechanisms of board renewal.

Position Descriptions

The Board has developed written position descriptions, which are reviewed annually, for the Chair and the chairs of each of the audit committee, the compensation committee and the corporate governance and nominating committee. The Chief Executive Officer also has a written position description that has been approved by the Board and is reviewed annually.

Orientation and Continuing Education

It is the mandate of the Corporate Governance and Nominating Committee to ensure that a process is established for the orientation and education of new directors that addresses the nature and operation of the Corporation's business and their responsibilities and duties as directors (including the contribution individual directors are expected to make and the commitment of time and resources that the Corporation expects from its directors).

The orientation includes an overview of the Corporation's history and operations, a review of industry conditions and competition, an introduction to the Corporation's management team and corporate and business information. Any further orientation is dependent on the needs of the new member and may include items such as formal training sessions and attendance at seminars.

With respect to the continuing education of directors, the Corporate Governance and Nominating Committee ensures that directors receive adequate information and continuing education opportunities on an ongoing basis to enable directors to maintain their skills and abilities as directors and to ensure their knowledge and understanding of the Corporation's business remains current.

Assessments

It is the Board's mandate, in conjunction with the Corporate Governance and Nominating Committee, to assess the participation, contributions and effectiveness of the Chair and the individual members of the Board on an annual basis. The Board also monitors the effectiveness of the Board and its committees and the actions of the Board as viewed by the individual directors and senior management.

The Board has developed a formal questionnaire to be completed by each director on an annual basis for the purpose of formally assessing the effectiveness of the Board as a whole, committees of the Board, and the contribution of individual directors. These questionnaires, and the issues arising therefrom, are intended to be reviewed and assessed by the Lead Director on an annual basis or more frequently from time to time as the need arises. The Lead Director takes appropriate action as required based on the results obtained.

Meeting Attendance

As stated in the Board Mandate, all directors are expected to attend each meeting in person, by phone or by video conference depending on the format of the meeting, to the extent practicable. The Board of Directors and its committees held 17 meetings during 2020. More specifically, the Audit Committee met five times, the Corporate Governance and Nominating Committee met twice and the Compensation Committee met once, in each case with all members in attendance, in addition to the nine meetings of the Board. All of our directors attended at least 75 percent or more of the aggregate meetings of the Board and all committees on which they served during our fiscal 2020.

The following table illustrates the attendance record of each director for all Board meetings held for the year ended December 31, 2020.

Director	Meetings Attended			
	Audit Committee	Corporate Governance and Nominating Committee	Compensation Committee	Board
Carol G. Ashe	-	2 of 2	1 of 1	9 of 9
Denis Burger	5 of 5	-	1 of 1	9 of 9
Caroline M. Loewy	5 of 5	2 of 2	-	6 of 9
Erich Platzer	-	-	1 of 1	9 of 9
William G. Rice	-	-	-	9 of 9
Mark Vincent	-	2 of 2	-	9 of 9
Warren Whitehead	5 of 5	-	-	9 of 9

All directors and director nominees are expected to attend the annual and special meeting. All the current directors attended last year's Annual Meeting of Shareholders.

Executive Sessions

The independent directors meet regularly without the presence of non-independent directors and members of management. During the year ended December 31, 2020, independent directors met six times without the presence of management non-independent directors as part of meetings of the Board, and members of the Audit Committee and Corporate Governance and Nominating Committee met one and two times, respectively, without the presence of management.

Ethical Business Conduct

We have adopted a code of ethics for directors, officers (including our principal executive officer, principal financial officer and principal accounting officer) and employees, known as the Code of Business Conduct and Ethics. The Code of Business Conduct and Ethics is available on our website at <http://www.aptose.com> under the Corporate Governance section of our Investors page. We will promptly

disclose on our website (i) the nature of any amendment to the policy that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions and (ii) the nature of any waiver, including an implicit waiver, from a provision of the policy that is granted to one of these specified individuals that is required to be disclosed pursuant to SEC rules and regulations, the name of such person who is granted the waiver and the date of the waiver.

The Corporate Governance and Nominating Committee regularly monitors compliance with the Code through communications with management and reports through the Disclosure and Insider Trading Policy (as described below) and ensures that management of the Corporation encourages and promotes a culture of ethical business conduct. A copy of the Code may be found by accessing the SEC's EDGAR filing database at www.sec.gov, on SEDAR at www.sedar.com and on our website at www.aptose.com.

The Corporation has developed a Disclosure and Insider Trading Policy that covers "whistle blowing" and provides an anonymous means for employees and officers to report violations of the Code or any other corporate policies, in addition to providing guidelines on employee trading in the Corporation's securities.

The Board has not granted any waiver of the Code in favor of a director or officer of the Corporation. No material change reports have been filed since the beginning of the Corporation's most recently completed fiscal year that pertain to any conduct of a director or executive officer that constitutes a departure from the Code.

Conflicts of Interest

The Corporate Governance and Nominating Committee monitors the disclosure of conflicts of interest by directors and ensures that no director will vote or participate in a discussion on a matter in respect of which such director has a material interest.

Shareholder Communications with the Board

Shareholders may communicate with the Board or any one particular director by sending correspondence, addressed to Dr. Jotin Marango, Chief Business and Strategy Officer and Corporate Secretary, 12770 High Bluff Drive, San Diego, California, 92130, with an instruction to forward the communication to the Board or one or more particular directors. He will forward promptly all such shareholder communications to the Board, or the one or more particular directors, after ascertaining whether the communications are appropriate to duties and responsibilities of the Board.

Board Committees

The Corporation has a standing Audit Committee, a Corporate Governance and Nominating Committee and a Compensation Committee, each of which are composed entirely of independent directors.

Audit Committee

Membership. The current members of the Audit Committee are Caroline Loewy, Denis Burger and Warren Whitehead. Mr. Whitehead is the Chair of the Audit Committee. The Board has determined that all members of the Committee qualify as financial experts under the listing standards of Nasdaq.

In addition, each current member of the Audit Committee qualifies as “independent” for purposes of membership on audit committees under the listing standards of Nasdaq, the rules and regulations of the SEC and NI 52-110.

Meetings. The Audit Committee met five times during the period from January 1, 2020 until December 31, 2020.

Committee Mandate. Among its responsibilities, the Audit Committee:

- serves as an independent and objective party to monitor the integrity of our financial reporting process and systems of internal controls regarding finance, accounting, and legal compliance, including the review of our consolidated financial statements, MD&A and annual and interim results;
- identifies and monitors the management of the principal risks that could impact our financial reporting;
- monitors the independence and performance of our independent auditors, including the pre-approval of all audit fees and all permitted non-audit services in accordance with federal securities laws and the rules and regulations of the SEC;
- provides an avenue of communication among the independent auditors, management, and the Board; and
- encourages continuous improvement of, and foster adherence to, our policies, procedures and practices at all levels.

The Audit Committee is also responsible for implementing and overseeing our whistle-blowing procedures.

Corporate Governance and Nominating Committee

Membership. The current members of the Corporate Governance and Nominating Committee are Mark Vincent, Carol Ashe and Caroline Loewy. Dr. Vincent is the Chair of the Committee. Each current member of the Committee qualifies as “independent” under the listing standards of Nasdaq, the rules and regulations of the SEC and NI 52-110.

Meetings. The Corporate Governance and Nominating Committee met twice during the period from January 1, 2020 until December 31, 2020. In addition, governance matters were discussed and considered at the Board level.

Committee Mandate. Among its responsibilities, the Corporate Governance and Nominating Committee:

- identifies qualified individuals to become Board members, consistent with criteria approved by the Board;
- determines the composition of the Board and its committees;

- selects the director nominees for the next annual meeting of shareholders;
- monitors a process to assess Board, committee and management effectiveness;
- aids and monitors management succession planning; and
- develops, recommends to the Board, implements and monitors policies and processes related to the Corporation’s corporate governance guidelines

Compensation Committee

Membership. The Compensation Committee is currently comprised of Board members Dr. Burger, Dr. Platzer and Ms. Ashe. Dr. Burger is the Chair of the Compensation Committee. Each current member of the Compensation Committee qualifies as “independent” for purposes of membership on compensation committees under the listing standards of Nasdaq, the rules and regulations of the SEC and NI 52-110, and as a “non-employee director” within the meaning of Rule 16b-3 under the Exchange Act.

Meetings. The Compensation Committee met once during the period from January 1, 2020 until December 31, 2020. In addition, compensation matters were discussed and considered at the Board level.

Committee Mandate. Among its responsibilities, the Compensation Committee:

- reviews and makes recommendations to the Board regarding the corporate goals and objectives, performance and compensation of the Chief Executive Officer and other senior executive officers on an annual basis;
- evaluates the performance of the Chief Executive Officer and other senior executive officers;
- makes recommendations to the Board with respect to the compensation policies for the non-employee directors;
- makes recommendations regarding annual bonus policies for employees, the incentive-compensation plans and equity-based plans for the Corporation; and
- reviews executive compensation disclosure before the Corporation publicly discloses this information.

As part of its process to make recommendations to the Board with respect of the compensation for the non-employee directors and other employees of the Corporation, the Compensation Committee consults with the President and Chief Executive Officer and other officers of the Corporation as it deems necessary.

Further information pertaining the compensation of directors and officers and the role and policies of the Compensation Committee can be found in this Proxy Statement under the heading “Executive Compensation”.

PROPOSAL NO. 2—APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board, on the Audit Committee’s advice, recommends the appointment of KPMG LLP, as the independent registered public accounting firm of the Corporation for the fiscal year ending December 31, 2021.

We are asking shareholders to approve the appointment of KPMG for the fiscal year ending December 31, 2021. If shareholders do not approve the appointment of KPMG LLP, the Audit Committee will reconsider its selection, but it retains sole responsibility for appointing and terminating our independent registered public accounting firm.

Representatives of KPMG LLP will be present at the Meeting.

Board Recommendation

The Board unanimously recommends a vote FOR the appointment of KPMG LLP as the independent registered public accounting firm of the Corporation for the fiscal year ending on December 31, 2021.

Audit, Audit-Related, Tax and Other Fees

The tables below present fees for professional services rendered by KPMG LLP for the fiscal years ended December 31, 2019 and 2020, respectively.

	Aggregate Amount Billed ⁽³⁾	
	2020	2019
Audit Fees ⁽¹⁾	\$ 240,898	\$ 360,117
Tax Fees ⁽²⁾	38,148	53,099
Total	\$ 279,046	\$ 413,216

- (1) Audit fees consisted of the audit of our annual financial statements for the fiscal years ended December 31, 2019 and 2020, respectively, and interim reviews. In addition, audit fees consist of the aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the issuer’s financial and include the provision of comfort letters and consents and the review of documents filed with regulatory authorities.
- (2) Tax fees include fees billed for assistance in the preparation of corporate tax returns and related filings and general tax advisory services.
- (3) All fees by KPMG are invoiced and paid in Canadian dollars. Fees for 2020 have been translated to US dollars at the Bank of Canada average annual exchange rate of 0.7454 and 2019 have been translated to US dollars at the Bank of Canada average annual exchange rate of 0.7536.

Pre-Approval Policies and Procedures

The Audit Committee has adopted procedures pursuant to which all audit, audit-related and tax services, and all permissible non-audit services provided by our independent registered public accounting firm must be pre-approved by the Audit Committee. All services rendered by KPMG LLP during our fiscal year 2020 were permissible under applicable laws and regulations and were all approved in advance by the Audit

Committee in accordance with the rules adopted by the SEC in order to implement requirements of the Sarbanes-Oxley Act of 2002.

Audit Committee Report

This report is furnished by the Audit Committee of the Board with respect to our financial statements for the year ended December 31, 2020.

One of the purposes of the Audit Committee is to oversee our accounting and financial reporting processes and the audit of our annual financial statements. Our management is responsible for the preparation and presentation of complete and accurate financial statements. Our independent registered public accounting firm, KPMG LLP, is responsible for performing an independent audit of our financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) and for issuing a report on their audit.

In performing its oversight role, the Audit Committee has reviewed and discussed our audited financial statements for the year ended December 31, 2020 with our management. Management represented to the Audit Committee that our financial statements were prepared in accordance with generally accepted accounting principles. The Audit Committee has discussed with KPMG LLP, our independent registered public accounting firm, the matters required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board and the Securities Exchange Commission. The Audit Committee has received the written disclosures and the letter from KPMG LLP required by the applicable requirements of the Public Company Accounting Oversight Board regarding communications with audit committees concerning independence. The Audit Committee has discussed with KPMG LLP its independence and concluded that the independent registered public accounting firm is independent from our company and our management.

Based on the review and discussions of the Audit Committee described above, the Audit Committee recommended to the Board that our audited financial statements for the year ended December 31, 2020 be included in our Annual Report on Form 10-K for the year ended December 31, 2020 for filing with the Securities and Exchange Commission.

Audit Committee

Warren Whitehead, Chair

Denis Burger

Caroline Loewy

PROPOSAL NO. 3—ADOPTION OF THE CORPORATION’S 2021 STOCK INCENTIVE PLAN

At the Meeting, Shareholders will be asked to approve an ordinary resolution (the “New Incentive Plan Resolution”) ratifying, confirming and approving the adoption of the Corporation’s 2021 stock incentive plan (the “New Incentive Plan”). A copy of the New Incentive Plan is attached hereto as Appendix B.

On April 20, 2021, the Board unanimously approved and adopted, subject to the approval of the Shareholders, the New Incentive Plan. The purpose of the New Incentive Plan is to promote the interests of the Corporation and its Shareholders by aiding the Corporation in attracting and retaining employees, officers, consultants, advisors, independent contractors and non-employee directors capable of assuring the future success of the Corporation, to offer such persons incentives to put forth maximum efforts for the success of the Corporation’s business and to compensate such persons through stock-based awards and provide them with opportunities for stock ownership in the Corporation, thereby aligning the interests of such persons with the Shareholders.

The New Incentive Plan authorizes the Board or committee or subcommittee of the Board appointed from time to time by the Board to administer the New Incentive Plan (the “Administrator”) to provide equity-based compensation in the form of stock options, stock appreciation rights (“SARs”), restricted stock, restricted stock units (“RSUs”) or Dividend Equivalents (collectively, “Awards”).

The Corporation currently maintains its existing Share Option Plan and 2015 SIP. If the New Stock Incentive Plan is approved by the Shareholders, no further grants will be made under the Share Option Plan or 2015 SIP, though existing grants under the Share Option Plan will remain in effect in accordance with their terms.

New Incentive Plan Highlights and Certain Important Provisions

- *Overall Share Limit.* The total number of Shares reserved under the New Incentive Plan is 6,343,242 Shares, which represents (i) 5.0 million Shares; plus (ii) 1,343,242 Shares which would have remained for grant under the 17.5% limit of the current Share Option Plan as of the date hereof and 2015 SIP, subject to equitable adjustment in the event of any change in capitalization. As of April 19, 2021, the closing price of a Share on Nasdaq was \$5.07.
- *Outstanding Awards under Incentive Plans.* As of April 20, 2021, there were 14,217,801 shares subject to issuance upon exercise of outstanding options under all of our equity compensation plans, at a weighted average exercise price of \$4.87, and a weighted average remaining life of 7.11 years. There were no issued and outstanding restricted shares and restricted stock units that remain outstanding.
- *No Liberal Recycling Provisions.* The New Incentive Plan provides that the following Shares shall not be recycled and shall not be made available again for grant under the New Incentive Plan: (i) any Shares which would have been issued upon any exercise of an option but for the fact that the exercise price was paid by a “net exercise” or any Shares tendered in payment of the exercise price of an option; (ii) any Shares withheld by the Corporation or Shares tendered to satisfy tax withholding obligations with respect to an Award; (iii) Shares covered by a stock-settled SAR issued under the New Incentive Plan that are not issued in connection with settlement in Shares upon exercise; or (iv) Shares that are repurchased by the Corporation using option exercise proceeds.
- *No Repricing of “Underwater” Options.* The Corporation will not reprice any previously granted Award for which the fair market value (being the closing price of the Shares, as

reported on the Nasdaq or TSX, the “Fair Market Value”) is less than the exercise price without Shareholder approval other than as a result of certain customary capitalization adjustments.

- *No Discount.* All options must have an exercise price equal to or greater than the Fair Market Value of the underlying Shares on the date of grant.
- *Change in Control.* Customary “Change in Control” provisions are triggered by the consummation of certain transactions, and not their approvals by the Board or the Shareholders. In addition, no Award agreement shall contain a definition of change in control that has the effect of accelerating the exercisability of any Award or the lapse of restrictions related to any Award upon only the announcement or Shareholder approval of (rather than consummation of) any reorganization, merger or consolidation of, or sale or other disposition of all or substantially all of the assets of, the Corporation.

New Plan Benefits

Future benefits under the New Incentive Plan cannot be determined at this time because the grants are at the discretion of the Board and because their value may be dependent upon the satisfaction of vesting conditions and the future price of the Shares. No grants under the New Incentive Plan have at this time been awarded or promised to any directors, employees or other eligible New Incentive Plan participants.

Summary of the New Incentive Plan

The following brief summary of the New Incentive Plan is not intended to be exhaustive and is qualified in its entirety by the terms of the New Incentive Plan, a copy of which is attached to this proxy statement as Appendix B.

Eligibility

Eligibility under the New Incentive Plan is limited to employees, officers, non-employee directors, consultants, independent contractors or advisors providing services to the Corporation or any entity controlled by the Corporation (an “Affiliate”), or any person to whom an offer of employment or engagement with the Corporation or any Affiliate is extended.

As of April 20, 2021, there were 41 employees, 3 officers, 6 non-employee directors, and 5 consultants which would be eligible to participate under the New Incentive Plan. The Administrator, in its sole discretion, will determine which eligible persons will receive Awards under the New Incentive Plan.

Shares Available for Awards

Subject to customary capitalization adjustments, the aggregate number of Shares that may be issued under all Awards under the New Incentive Plan shall equal 6,343,242 Shares, which represents (i) 5.0 million Shares; plus (ii) 1,343,242 Shares which would have remained for grant under the 17.5% limit of the current Share Option Plan and 2015 SIP, subject to equitable adjustment in the event of any change in capitalization. In addition, any Shares subject to any outstanding award under the Share Option Plan or the 2015 SIP (the “Prior Awards”) that, on or after the date the New Incentive Plan is approved by Shareholders, are not purchased or are forfeited, paid in cash or reacquired by the Corporation, or otherwise not delivered to the participant due to termination or cancellation of such Prior Award will become available under the New Incentive Plan. Any Shares subject to an Award that is forfeited, cancelled, exchanged or surrendered or that otherwise terminates or expires without a distribution of Shares shall again be available for grant under the

New Incentive plan. Shares underlying Awards that can only be paid in cash do not count against the overall New Incentive Plan share limit.

The New Incentive Plan provides that the following Shares shall not be recycled and again made available for grant under the New Incentive Plan: (i) any Shares which would have been issued upon any exercise of an option but for the fact that the exercise price was paid by a “net exercise” or any Shares tendered in payment of the exercise price of an option; (ii) any Shares withheld by the Corporation or Shares tendered to satisfy tax withholding obligations with respect to an Award; (iii) Shares covered by a stock-settled SAR issued under the New Incentive Plan that are not issued in connection with settlement in Shares upon exercise; or (iv) Shares that are repurchased by the Corporation using option exercise proceeds. In addition, Shares issued under Awards granted in substitution for awards previously granted by an entity that is acquire by or merged with the Corporation or an Affiliate shall not be counted against the aggregate number of Shares available for Awards under the New Incentive Plan.

In the event that any dividend (other than a regular cash dividend) or other distribution (whether in the form of cash, Shares, other securities or property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of Shares or other securities of the Corporation, issuance of warrants or other rights to purchase Shares or other securities of the Corporation order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the New Incentive Plan, then the Administrator shall, in accordance with applicable law and in such manner as it may deem equitable, adjust any or all of (i) the number and type of Shares (or other securities or other property) that thereafter may be made the subject of Awards, and (ii) the number and type of Shares (or other securities or other property) subject to outstanding Awards.

Types of Awards

Options

The New Incentive Plan authorizes awards of options. Subject to the limitations of the New Incentive Plan, the Administrator may grant options for such number of Shares and having such terms as the Administrator designates.

Options shall vest and be exercisable in the timeframe determined by the Administrator, which shall be set forth in the applicable option award agreement. The Administrator fixes the term of each option when granted, but such term may not be greater than 10 years from the date of grant. The exercise price of options is established by the Administrator and shall not be less than 100% of the Fair Market Value of a Share on the date of grant, except in limited circumstances. Payment for the exercise price may be made in cash or its equivalent, payment in unrestricted Shares already owned by the participant or, to the extent permitted under the relevant option award agreement, payment through (i) the sale by a broker acceptable to the Corporation on behalf of the participant of a portion of the Shares subject to the option, or (ii) the withholding of Shares that would otherwise be issuable in connection with the exercise of the options.

Stock Appreciation Rights

The New Incentive Plan authorizes awards of SARs, which confer to the holder a right to receive the excess of (i) the Fair Market Value of one Share on the date of exercise over (ii) the grant price of the SAR as specified in the relevant award agreement, which price shall not be less than 100% of the Fair Market Value of one Share on the date of grant of the SAR. The terms and conditions of a SAR will be set forth in an applicable award agreement, as determined by the Administrator. The Administrator fixes the term of each SAR when granted, but such term may not be greater than 10 years from the date of grant.

Restricted Stock and Restricted Stock Units

The New Incentive Plan authorizes awards of restricted stock and Restricted Stock Units, which will confer to the holder Shares or a right to receive Shares subject to such restrictions as the Administrator may impose in an award agreement.

Restricted stock shall be issued at the time such Awards are granted and will be held by the Corporation or a nominee until they are no longer subject to restrictions. In the case of Restricted Stock Units, no Shares shall be issued at the time such Awards are granted. Upon the lapse or waiver of restrictions and the restricted period relating to Restricted Stock Units evidencing the right to receive Shares, such Shares shall be issued and delivered to the holder of such Restricted Stock Units.

Dividend Equivalents

The New Incentive Plan authorizes the Administrator to grant Dividend Equivalents under which the participant shall be entitled to receive payments equivalent to and in lieu of the amount of cash dividends paid by the Corporation to holders of Shares with respect to a number of Shares determined by the Administrator. The Administrator may not, however, grant Dividend Equivalents to participants in connection with grants of options or SARs and dividend and Dividend equivalent amounts with respect to any Share underlying restricted stock or Restricted Stock Unit awards may be accrued but not paid to a participant until all conditions or restrictions relating to such Share have been satisfied, waived or lapsed.

Limitations on Awards

The sum of the grant date fair value of equity-based Awards and the amount of any cash-based compensation granted to a non-employee director during any calendar year shall not exceed \$500,000, subject to certain exceptions for compensation granted to a non-executive chair of the Board, in limited circumstances.

Transfer of Awards

No Award (other than fully vested and unrestricted Shares issued pursuant to any Award) and no right under any such Award shall be transferrable other than by will or by the laws of descent and distribution. In addition, no Award (other than fully vested and unrestricted Shares issued pursuant to any Award) and no right under any such Award may be pledged, alienated, attached or otherwise encumbered, and any purported pledge, alienation, attachment or encumbrance thereof shall be void and unenforceable against the Corporation or any Affiliate.

Amendment and Termination

The Board may from time to time amend, suspend or terminate the New Incentive Plan or any Award agreement, and the Administrator may amend the terms of any previously granted Award, provided that no amendment to the terms of any previously granted Award may (except as expressly provided in the New Incentive Plan), materially and adversely alter or impair the terms or conditions of the Award previously granted without the participant's consent. Any amendment to the New Incentive Plan, an Award agreement or to the terms of any Award previously granted is subject to compliance with all applicable laws, rules, regulations and policies of any applicable laws, rules, regulations and policies of any applicable governmental entity or stock exchange.

Prior approval of the Shareholders shall be required to make any amendment to the New Incentive Plan or an Award that would (i) require Shareholder approval under the rules of the TSX, the rules or regulations of the SEC, or any other securities exchange that is applicable to the Corporation; (ii) increase the

number of Shares authorized under the New Incentive Plan; (iii) permit repricing of Options or SARs, which is currently prohibited; (iv) permit the award of Options or SARs at a price less than 100% of the Fair Market Value of a Share on the date of grant; (v) increase the maximum term permitted for options and for SARs; or (vi) increase the maximum number of Shares or dollar value of Awards which can be granted to a participant in a calendar year.

Change in Control

Effective upon the consummation (or immediately prior to the consummation) of any reorganization, merger, consolidation, split-up, spin-off, combination, plan of arrangement, take-over bid or tender offer, repurchase or exchange of Shares or other securities of the Corporation or any other similar corporate transaction or event involving the Corporation (each, a “Change in Control Event”), the Administrator may, in its sole discretion, provide for (i) the termination of any Award, whether or not vested, in exchange for an amount of cash and/or other property; (ii) the replacement of any Award with other rights or property selected by the Administrator in its sole discretion; (iii) the Award to be assumed by, or substituted for a similar Award from, the successor or survivor of the Corporation, or a parent or subsidiary thereof, with appropriate adjustments; (iv) the vesting or exercisability of Awards notwithstanding anything to the contrary in the applicable Award Agreement; or (v) the determination of a future date after which Awards cannot vest, be exercised or become available, which may be the effective date of the Change in Control Event.

Clawback Provisions

All awards under the New Incentive Plan are subject to forfeiture or other penalties pursuant to any clawback policy that may be adopted by the Corporation.

U.S. Federal Income Tax Consequences

Grant of Options and SARs. The grant of a stock option or SAR is not expected to result in any taxable income to the recipient.

Exercise of Options and SARs. Upon exercising a non-qualified stock option, the optionee must recognize ordinary income equal to the excess of the fair market value of the shares of the Corporation’s common stock acquired on the date of exercise over the exercise price. The holder of a tax-qualified Incentive Stock Option (“ISO”) generally will have no taxable income upon exercising the option (except that an alternative minimum tax liability may arise). Upon exercising a SAR, the amount of any cash received and the fair market value on the exercise date of any of our Shares received are taxable to the recipient as ordinary income.

Disposition of Shares Acquired Upon Exercise of Options and SARs. The tax consequence upon a disposition of Shares acquired through the exercise of an option or SAR will depend on how long the Shares have been held and whether the shares were acquired by exercising an ISO or by exercising a non-qualified stock option or SAR. Generally, there will be no tax consequence to the Corporation in connection with the disposition of Shares acquired under an option or SAR in the case of the disposition of Shares acquired under an ISO if the disposition occurs before the applicable ISO holding periods set forth in the Internal Revenue Code have been satisfied.

Awards Other Than Options and SARs. If an award is payable in Shares that are subject to substantial risk of forfeiture, unless a special election is made by the holder of the award under the Internal Revenue Code, the holder must recognize ordinary income equal to the excess of: (i) the fair market value of the Shares received (determined as of the first time the Shares become transferable or not subject to substantial risk of forfeiture, whichever occurs earlier) over (ii) the amount (if any) paid for the Shares by the holder of

the award. As to other awards granted under the New Incentive Plan that are payable either in cash or shares of our common stock not subject to substantial risk of forfeiture, the holder of the award must recognize ordinary income equal to: (a) the amount of cash received or, as applicable, (b) the excess of (i) the fair market value of the shares received (determined as of the date such shares are received) over (ii) the amount (if any) paid for the shares by the holder of the award.

Special Rules for Executive Officers Subject to Section 16 of the Exchange Act. Special rules may apply to individuals subject to Section 16 of the Securities Exchange Act of 1934. In particular, unless a special election is made pursuant to the Internal Revenue Code, shares received through the exercise or settlement of an award may be treated as restricted as to transferability and subject to a substantial risk of forfeiture for a period of up to six months after the date of exercise. Accordingly, the amount of any ordinary income recognized will be determined as of the end of that period.

Section 409A of the Internal Revenue Code. The Administrator intends to administer and interpret the New Incentive Plan and all award agreements in a manner consistent to satisfy the requirements of Section 409A of the Internal Revenue Code to avoid any adverse tax results thereunder to a holder of an award.

THE FOREGOING IS ONLY A SUMMARY OF THE EFFECT OF U.S. FEDERAL INCOME TAXATION UPON PARTICIPANTS AND THE CORPORATION UNDER THE NEW INCENTIVE PLAN. IT DOES NOT PURPORT TO BE COMPLETE AND DOES NOT DISCUSS THE TAX CONSEQUENCES OF A PARTICIPANT'S DEATH OR THE PROVISIONS OF THE INCOME TAX LAWS OF ANY MUNICIPALITY, STATE OR FOREIGN COUNTRY IN WHICH THE PARTICIPANT MAY RESIDE.

Canadian Federal Income Tax Consequences

The following is, as of the date of this Proxy Statement, a summary of the principal Canadian federal income tax consequences under the *Income Tax Act* (Canada) (referred to throughout as the "Act") applicable to the granting, holding and disposing of rights to acquire, or one or more resulting, Shares by an eligible person on the exercise or settlement of an award granted to the eligible person pursuant to the New Incentive Plan.

The summary is based on the current provisions of the Act and the regulations thereunder in effect on the date of this Proxy Statement and does not take into account any proposed amendments to the Act. In particular, it does not take into account draft legislation tabled or any announced changes resulting from an Economic Statement or Federal Budget affecting the taxation of employee stock options.

This summary does consider the current administrative policies of Canada Revenue Agency, and we assume that each administrative policy will continue to be applied and that no other relevant change to any applicable law will be made, although no assurance can be given in these respects.

This summary does not take into account any applicable provincial, territorial or foreign tax laws. Comment is restricted to the case of an eligible person who is an individual and who holds his common shares as capital property and deals at arm's length with the Corporation and each of our associated, affiliated, controlled and subsidiary companies.

We assume in this summary that such eligible person does not use or hold (and will not use or hold) and is not (and will not be) deemed to use or hold his Shares in, or in the course of carrying on, a business in Canada. We further assume that the exercise price of any stock option granted is not less than the fair market value of the Shares at the time the option was granted and that at the time any options are exercised, the

common shares will satisfy the requirements for “prescribed shares” as set out in section 6204 of the regulations under the Act.

Generally speaking, a “prescribed share” is an ordinary common share that does not have any fixed or special entitlements and cannot reasonably be expected to be redeemed, acquired or cancelled by the corporation or a specified person, except in certain limited circumstances specified in section 6204 of the regulations.

For all equity based compensation awards granted to a resident of Canada, the Corporation or an affiliate will be required to deduct, withhold and remit tax and social security (i.e. Canada or Québec Pension Plan and Employment Insurance premiums) amounts and report the award on the employee’s T4 slip for the year in which income taxation is realized.

This summary assumes that an eligible person participating in the New Incentive Plan will be a resident of Canada (referred to throughout as a “Canadian Participant”) for purposes of both the Act and the Convention Between Canada and the United States of America with Respect to Taxes on Income and on Capital, signed September 26, 1980, as amended (the “Canada-U.S. Tax Convention”). A Canadian Participant may be a director, officer or employee of the Company or any of our associated, affiliated, controlled and subsidiary companies (referred to throughout as a “Canadian Employee”) or a consultant (referred to throughout as a “Canadian Consultant”).

Finally, the following discussion is not exhaustive and may not cover all aspects of a participant’s unique tax situation. This summary should not be construed as tax advice by the Corporation, and it was not intended or written to be used, and it cannot be used, by any person for the purpose of avoiding any tax penalties that may be imposed on such person. Participants should seek advice based on their particular circumstances from an independent tax advisor.

Grant of Options. No Canadian federal income tax consequences should arise as a consequence of the grant of a stock option to a Canadian Employee in respect of, in the course of, or by virtue of their employment. Where a Canadian Consultant receives an option under the New Incentive Plan as payment for services, generally the fair market value of the option at the time of grant will be taxable as regular business income.

Exercise of Options. A Canadian Employee who acquires Shares in a taxation year pursuant to the exercise of an option will be deemed to have received a benefit by virtue of his employment equal to the amount by which the value of the common shares at the time of acquisition exceeds the amount paid by him for the common shares (the “Benefit”). The Benefit is included in the employment income of the Canadian Employee in the year the option is exercised.

The Canadian Employee may be entitled to a deduction in computing his taxable income for the year in which the Benefit is included in income, equal to one-half of the amount of the Benefit (the “Deduction”), provided that: (i) the exercise price of the option was not less than the fair market value of the common shares at the time the option was granted; (ii) there has not been any adjustment of the exercise price or the number of common shares to be issued on the exercise of options (to account for the payment of dividends or otherwise); (iii) the only securities acquired on the exercise of the options are common shares that are prescribed shares at the time they are acquired; and (iv) the Canadian Employee dealt at arm’s length with us and with each of our subsidiaries immediately after the grant of the options.

Effective July 1, 2021, announced changes to the Act which have not yet been implemented would, if enacted, result in stock options eligible for the 50 per cent deduction being limited to an annual cap of CA\$200,000 calculated on the fair market value of the underlying shares on the date the options were granted.

Where Shares are issued, neither the Corporation nor any Canadian affiliate would be entitled to a deduction.

Disposition of Shares Acquired Upon Exercise of Options. Shares acquired by a Canadian Employee are generally capital property for purposes of the Act. The Canadian Employee's adjusted cost base of each Share at any time is generally determined by reference to the average cost of all Shares of the same class held by the Canadian Employee at that time, whether acquired through stock options or otherwise. On a disposition of Shares, the Canadian Employee will realize a capital gain (or loss) equal to the amount by which the net proceeds of disposition exceed (or, are exceeded by) the Canadian Employee's adjusted cost base of such shares. One half of capital gains ("taxable capital gain") net of one half of capital losses ("allowable capital loss") realized in the year is included in the employee's income for the year and taxed at ordinary rates. If allowable capital losses exceed taxable capital gains realized in the year, the net capital loss may generally be carried back three taxation years and forward to future years to offset taxable capital gains realized in those years.

SARs

From the perspective of the Canadian Employee, there will be no income inclusion at the time of grant of a SAR provided that the initial value at the date of grant of the SAR, from which the increase will be measured, is no greater than the fair market value of the Share at the time of grant.

The amount equal to the appreciation in value (if any) in the stock price from the grant date to a pre-settlement date will be included in the Canadian Employee's income from employment in the year of receipt.

Where Shares are issued, neither the Corporation nor any Canadian affiliate would be entitled to a deduction.

Restricted Stock

The New Incentive Plan authorizes awards of restricted stock which will confer to the holder Shares subject to such restrictions as the Administrator of the New Incentive Plan may impose in an award agreement. Under Canadian tax rules, the Canadian Employee would be taxed on the value of restricted stock at the time such Shares are issued. The only relief is that the Canada Revenue Agency will permit a reasonable discount from the fair market value of a share that is not subject to any restrictions in determining the value of a restricted share. Dividends received on Shares are taxed to the Canadian Employee as dividend income.

Neither the Corporation nor any Canadian affiliate would be entitled to a deduction.

Restricted Share Units

In the case where Shares are issued and delivered to a Canadian Employee upon vesting and settlement of the RSUs, no amount is required to be included in the Canadian Employee's income until such Shares are issued and delivered. At such time, an amount equal to the fair market value of the Shares received is included in the Canadian Employee's employment income to be taxed at the Canadian Employee's applicable marginal tax rates.

The New Incentive Plan authorizes the Administrator to grant Dividend Equivalents under which Canadian Employees shall be entitled to receive payments equivalent to and in lieu of the amount of cash dividends paid by the Corporation to holders of Shares with respect to a number of Shares determined by the Administrator. Dividend Equivalents are effectively a book entry only and are not taxable until the DSUs are settled.

Where the RSUs are settled in Shares, the subsequent disposition of the Shares by the Canadian Employee would generate capital gains or a capital loss depending on the value of the Shares at that time and such capital gain or loss (if any) would be reflected in the Canadian Employee's tax return.

Neither the Corporation nor any Canadian affiliate would be entitled to deduction.

THE FOREGOING IS ONLY A SUMMARY OF THE EFFECT OF CANADIAN FEDERAL INCOME TAXATION UPON PARTICIPANTS AND THE CORPORATION UNDER THE NEW INCENTIVE PLAN. IT DOES NOT PURPORT TO BE COMPLETE AND DOES NOT DISCUSS THE TAX CONSEQUENCES OF A PARTICIPANT'S DEATH OR THE PROVISIONS OF THE INCOME TAX LAWS OF ANY MUNICIPALITY, PROVINCE, STATE OR FOREIGN COUNTRY IN WHICH THE PARTICIPANT MAY RESIDE.

Approval

With respect to the New Incentive Plan, the Corporation is relying on an exemption from certain requirements of the TSX Company Manual relating to security based compensation arrangements as it qualifies as an "Eligible Interlisted Issuer" as defined in Section 602.1 of the TSX Company Manual.

The New Incentive Plan Resolution requires the approval of a majority of the votes cast by the Shareholders at the Meeting. Whether or not the New Plan Resolution is approved, all options already granted and currently outstanding under the Share Option Plan will remain in effect. However, the policies of the TSX require that unallocated options, rights or entitlements under security-based compensation plans that do not have a fixed maximum number of shares issuable thereunder (a "rolling" plan), which include the Share Option Plan and the 2015 SIP, be approved and reaffirmed by shareholders every three year (the "Allocation Period"). As the last Allocation Period expires on June 5, 2021 and the Corporation is not presenting unallocated options, rights or entitlements under the Share Option Plan and the 2015 SIP (the "Unallocated Entitlements") for approval at the Meeting, if the New Incentive Plan Resolution is not approved, any Unallocated Entitlements under the Share Option Plan and 2015 SIP will not be available for future grants after June 5, 2021, and previously granted options will not be available for reallocation if they are cancelled prior to the exercise, or if they are exercised, which would constitute a reduction of the current limit. Therefore, at the Meeting, Shareholders will be asked to consider, and if deemed advisable, to pass the following New Incentive Plan Resolution:

BE IT RESOLVED AS AN ORDINARY RESOLUTION OF THE SHAREHOLDERS THAT:

1. the 2021 stock incentive plan (the "New Incentive Plan") of Aptose Biosciences Inc. (the "Corporation"), in substantially the form described in, and attached as Appendix B to the Corporation's proxy statement dated April 20, 2021 (the "Proxy Statement") is hereby ratified, confirmed and approved;
2. the maximum number of common shares in the capital of the Corporation (the "Shares") authorized and reserved for issuance under the New Incentive Plan shall be a fixed limit of up to an aggregate of 6,343,242 Shares and, for the avoidance of doubt, the limit imposed in the previously adopted share option plan and 2015 stock incentive plan (the "Previous Plans") is removed provided that no new grants will be made under such Previous Plans; and
3. any director or officer of the Corporation is authorized and directed to execute and deliver for and in the name of and on behalf of the Corporation all such certificates, instruments, agreements, notices and other documents and to do such other acts and things as, in the opinion of such persons, may be necessary or desirable to give effect to the foregoing and

facilitate the implementation of the foregoing resolutions.

Unless you have specified in the enclosed form of proxy that the votes attaching to the Shares represented by the proxy are to be voted against the New Incentive Plan Resolution on any ballot that may be called for, the management representatives designated in the enclosed form of proxy intend to vote the Shares in respect of which they are appointed proxy FOR the New Incentive Plan Resolution.

Board Recommendation

The Board believes the passing of the New Incentive Plan Resolution is in the best interest of the Corporation and unanimously recommends a vote FOR the passing of the New Incentive Plan Resolution.

PROPOSAL NO. 4—APPROVAL OF THE CORPORATION’S 2021 EMPLOYEE STOCK PURCHASE PLAN

At the Meeting, Shareholders will be asked to approve an ordinary resolution (the “ESPP Resolution”) ratifying, confirming and approving the adoption of the Corporation’s 2021 employee stock purchase plan (the “ESPP”). A copy of the ESPP is attached hereto as Appendix C. If approved, the ESPP will be effective on July 2, 2021.

On April 20, 2021, the Board unanimously approved and adopted, subject to the approval of the Shareholders, the ESPP. The Board of Directors believes that an employee stock purchase plan encourages employees to acquire Shares, thereby fostering broad alignment of employees’ interests with the interests of the Shareholders.

ESPP Highlights

The ESPP

- Reserves 1,700,000 Shares. As of April 19, 2021, the closing price of a Share on Nasdaq was \$5.07;
- permits a participant to contribute up to 15% of his or her eligible compensation each pay period through payroll deductions;
- establishes offering periods (usually two 6-month offering periods);
- permits participants to purchase Shares at a purchase price equal to 85% of the lesser of (i) the Fair Market Value of the Shares on the first trading day of an offering period (the “Offering Date”), and (ii) the Fair Market Value of the Shares on the last trading day of any offering period (or purchase period, if applicable) (the “Exercise Date”); and
- limits the value of Shares that a participant may purchase in a calendar year to \$25,000 and limits the number of Shares that may be purchased by a participant under the ESPP to less than 5% of the outstanding Shares or 10,000 Shares per offering period.

New Plan Benefits

Participation in the ESPP is voluntary and each eligible employee will have the discretion to determine whether and to what extent to participate in and contribute to the ESPP. Accordingly, the benefits and amounts that will be received or allocated to officers and other employees under the ESPP are not determinable at this time.

Summary of Material Provisions of the ESPP

The following brief summary of the ESPP is not intended to be exhaustive and is qualified in its entirety by the terms of the ESPP, a copy of which is attached to this proxy statement as Appendix C.

Plan Administration

The ESPP is expected to be administrated by the Compensation Committee, or by the Board acting in place of the Compensation Committee. Subject to the terms of the ESPP, the Compensation Committee

will have the authority to, among other matters determine the terms and conditions of offerings under the ESPP, determine the eligibility of participants, and construe, interpret and apply the terms of the ESPP.

Shares Reserved for Issuance

Subject to customary capitalization adjustments, the maximum number of Shares reserved for issuance from treasury under the ESPP is 1,700,000.

Eligibility

Any individual who is a common law employee of the Corporation and any of its subsidiaries designated by the Compensation Committee for at least 20 hours per week on any given Offering Date will be eligible to participate in the ESPP.

The Compensation Committee may, in its discretion, exclude the following categories of employees from participation: (i) employees who have not completed at least two years of service since their last hire date; (ii) employees who customarily work not more than 20 hours per week or five months per calendar year; or (iii) certain highly-compensated employees.

As of April 20, 2021, there are approximately 44 employees which would be eligible to participate under the ESPP.

Offering Periods

The ESPP is currently expected to be administered through consecutive six-month periods referred to as “Offering Periods”. The Offering Periods will be determined by the Compensation Committee, provided that no Offering Period may extend for a period longer than 27 months.

On the Offering Date, each eligible employee who has properly enrolled in that Offering Period will be granted an option to purchase Shares to be funded by payroll deductions, based on the participant’s elected contribution rate. Unless a participant has properly withdrawn from the Offering Period, each option granted under the ESPP will automatically be exercised on the Exercise Date. The purchase price will be equal to 85% of the lesser of the Fair Market Value of the Shares on (i) the Offering Date; and (ii) the Exercise Date.

Contribution and Purchase Limitations

Unless otherwise determined by the Compensation Committee in accordance with the terms of the ESPP, no participant may (i) elect a contribution rate of more than 15% of his or her compensation for the purchase of Shares under the ESPP in any one payroll period; (ii) purchase more than 10,000 Shares under the ESPP on any one Exercise Date; or (iii) purchase Shares that have a Fair Market Value of more than \$25,000, determined as of the Offering Date, in any calendar year.

Certain Corporate Transactions

If the number of outstanding Shares is changed by a dividend or other distribution (whether in the form of cash, Shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Shares or other securities of the Corporation, or other change in the corporate structure of the Corporation affecting the Shares occur, the Compensation Committee, in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the ESPP will, in such manner as it may deem equitable, adjust the number and class of shares which may be delivered under the ESPP, the purchase price and the

number of Shares covered by each option under the ESPP which has not yet been exercised, and the contribution and purchase limitations.

Amendments and Termination

The Compensation Committee may generally amend, suspend, or terminate the ESPP at any time without Shareholder approval.

U.S. Federal Income Tax Consequences

The following brief summary of the effect of federal income taxation upon the participant and the Corporation with respect to the shares purchased under the ESPP does not purport to be complete, and does not discuss the tax consequences of a participant's death or the income tax laws of any state or foreign country in which the participant may reside.

The ESPP, and the right of participants to make purchases thereunder, is intended to qualify under the provisions of Sections 421 and 423 of the Internal Revenue Code. Under these provisions, no income will be taxable to a participant until the shares purchased under the ESPP are sold or otherwise disposed of. Upon sale or other disposition of the shares, the participant will generally be subject to tax in an amount that depends upon the holding period. If the shares are sold or otherwise disposed of more than two years from the first day of the applicable offering period and one year from the applicable date of purchase, the participant will recognize ordinary income measured as the lesser of (i) the excess of the fair market value of the shares at the time of such sale or disposition over the purchase price, or (ii) an amount equal to 15% of the fair market value of the shares as of the first date of the applicable offering period. Any additional gain will be treated as long term capital gain. If the shares are sold or otherwise disposed of before the expiration of these holding periods, the participant will recognize ordinary income generally measured as the excess of the fair market value of the shares on the date the shares are purchased over the purchase price. Any additional gain or loss on such sale or disposition will be long term or short-term capital gain or loss, depending on how long the shares have been held from the date of purchase.

THE FOREGOING IS ONLY A SUMMARY OF THE EFFECT OF U.S. FEDERAL INCOME TAXATION UPON PARTICIPANTS AND THE CORPORATION UNDER THE ESPP. IT DOES NOT PURPORT TO BE COMPLETE AND DOES NOT DISCUSS THE TAX CONSEQUENCES OF A PARTICIPANT'S DEATH OR THE PROVISIONS OF THE INCOME TAX LAWS OF ANY MUNICIPALITY, STATE OR FOREIGN COUNTRY IN WHICH THE PARTICIPANT MAY RESIDE.

Canadian Federal Income Tax Consequences

Discounted stock purchase plans that meet the requirements of section 423 of the Internal Revenue Code are given favourable U.S. tax treatment. This is not the case in Canada, however, and the Canadian tax treatment of a section 423 plan needs to be considered where the plan is extended to Canadian Employees.

In Canada, this type of plan would constitute an agreement by the Corporation to sell shares to a Canadian Employee within the meaning of section 7 of the Act. Accordingly, at the end of each offering period when Shares are purchased for the Canadian Employee, paragraph 7(1)(a) of the Act would deem the Canadian Employee to receive a benefit from employment equal to the amount by which the Fair Market Value of the Share on the date of purchase exceeds the purchase price. Care should be taken in determining the amount of the Section 7 benefit.

Where the purchase price for shares under a section 423 plan is set at a discount from the lower of Fair Market Value at the start and end of the offering period, there would never be an instance where the

purchase price would be equal to or greater than the Fair Market Value of the Share at the date of grant of the option (i.e., the commencement of the offering period) to purchase Shares. Accordingly, in these circumstances, the Canadian Employee would not be entitled to claim the 50% deduction under paragraph 110(1)(d) of the Act.

Neither the Corporation nor any Canadian affiliate would be entitled to a tax deduction in respect of the ESPP.

THE FOREGOING IS ONLY A SUMMARY OF THE EFFECT OF CANADIAN FEDERAL INCOME TAXATION UPON PARTICIPANTS AND THE CORPORATION UNDER THE ESPP. IT DOES NOT PURPORT TO BE COMPLETE AND DOES NOT DISCUSS THE TAX CONSEQUENCES OF A PARTICIPANT'S DEATH OR THE PROVISIONS OF THE INCOME TAX LAWS OF ANY MUNICIPALITY, PROVINCE, STATE OR FOREIGN COUNTRY IN WHICH THE PARTICIPANT MAY RESIDE.

Approval

With respect to the ESPP, the Corporation is relying on an exemption from certain requirements of the TSX Company Manual relating to security based compensation arrangements as it qualifies as an "Eligible Interlisted Issuer" as defined in Section 602.1 of the TSX Company Manual.

The ESPP Resolution requires the approval of a majority of the votes cast by the Shareholders at the Meeting. Therefore, at the Meeting, Shareholders will be asked to consider, and if deemed advisable, to pass the following ESPP Resolution:

BE IT RESOLVED AS AN ORDINARY RESOLUTION OF THE SHAREHOLDERS THAT:

1. the 2021 employee stock purchase plan (the "ESPP") of Aptose Biosciences Inc. (the "Corporation"), in substantially the form described in, and attached as Appendix C to the Corporation's proxy statement dated April 20, 2021 (the "Proxy Statement") is hereby ratified, confirmed and approved;
2. the maximum number of common shares in the capital of the Corporation (the "Shares") authorized and reserved for issuance from treasury under the ESPP shall be a fixed limit of up to an aggregate of 1,700,000 Shares and, for the avoidance of doubt, the limit imposed in the previously adopted share option plan and 2015 stock incentive plan (the "Previous Plans") is removed provided that no new grants will be made under such Previous Plans; and
3. any director or officer of the Corporation is authorized and directed to execute and deliver for and in the name of and on behalf of the Corporation all such certificates, instruments, agreements, notices and other documents and to do such other acts and things as, in the opinion of such persons, may be necessary or desirable to give effect to the foregoing and facilitate the implementation of the foregoing resolutions.

Unless you have specified in the enclosed form of proxy that the votes attaching to the Shares represented by the proxy are to be voted against the ESPP Resolution on any ballot that may be called for, the management representatives designated in the enclosed form of proxy intend to vote the Shares in respect of which they are appointed proxy FOR the ESPP Resolution.

Board Recommendation

The Board believes the passing of the ESPP Resolution is in the best interest of the Corporation and unanimously recommends a vote FOR the passing of the ESPP Resolution.

PROPOSAL NO. 5—ADVISORY (NON-BINDING) VOTE ON THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS

As required by Section 14A of the Exchange Act, the Corporation is seeking a vote on an advisory basis to approve the compensation of the Named Executive Officers (as defined below), as disclosed in this Proxy Statement. Because this vote is advisory, the results will not be binding on the Corporation or the Board. However, this proposal, commonly known as a “say-on-pay” proposal, gives Shareholders the opportunity to endorse or not endorse the Corporation’s executive compensation programs and the results will be taken into consideration when future decisions regarding executive compensation are made.

As described under “Executive Compensation” below, the Corporation believes that its executive compensation programs are designed to:

- attract and retain qualified, motivated and achievement-oriented individuals by offering compensation that is competitive in the industry and marketplace;
- align executive interests with the interests of Shareholders; and
- ensure that individuals continue to be compensated in accordance with their personal performance and responsibilities and their contribution to the overall objectives of the Corporation.

These objectives are achieved by offering executives and employees a compensation package that is competitive and rewards the achievement of both short-term and long-term objectives of the Corporation.

The Corporation, the Board and the Compensation Committee believe that the executive compensation of its Named Executive Officers is reasonable and appropriate, justified by the Corporation’s performance and conducive for long-term value creation. The Corporation’s view is that the compensation of its executives must be competitive, weighted and fair. For this reason, the Compensation Committee retained Radford (an Aon Consulting Company) in 2018, and more recently in 2020, to provide independent advice regarding executive compensation to the Compensation Committee. Radford concluded, in December 2020, that the executive compensation program was generally aligned with market (between the 50th and the 75th percentile for the cash and equity portions of the compensation package).

In early 2020, the Board recognized that the executive management team had achieved their 2019 corporate and individual executive officer objectives beyond expectations by the Board. Specifically, the executive management team recruited key personnel, achieved essential financing activity for the Corporation, and advanced the pipeline into vital clinical activities during 2019. More specifically, the Corporation completed in 2019 two public offerings of common shares, raising gross proceeds of \$74.2 million in December and \$21.3 million in June, the net proceeds of which extended the cash runway of the Corporation and are being used to accelerate and expand its clinical trial programs to allow the Corporation to become a true clinical-stage company, treating patients in three distinct clinical programs. The Board determined that the financing and development efforts conducted by the executive management team in 2019 were therefore crucial to support the pipeline and long-term objectives of the Corporation and contributed to the creation of long-term value, therefore justifying substantial grants of options and RSUs. Further, the Board recognized that historical circumstances resulted in equity ownership by key executives that were likely insufficient to retain such executives in competition with more lucrative external offers. In response to the conflation of influences at a pivotal time in the Corporation’s evolution, the Board, upon recommendation of the Compensation Committee, proceeded to award substantial grants of options and RSUs in 2020 that were atypical when compared to prior years.

The Corporation urges Shareholders to read the section entitled “Executive Compensation” and the related narrative and tabular compensation disclosure included in this Proxy Statement. The section entitled “Executive Compensation” provides detailed information regarding the Corporation’s executive compensation program, as well as the compensation of the Named Executive Officers.

At the Meeting, Shareholders will be asked to consider and, if deemed appropriate, to approve, an advisory (non-binding) resolution in the form set out below (the “Say-on-Pay Resolution”), subject to such amendments, variations or additions as may be approved at the Meeting. In order to be passed, the advisory (non-binding) Say-on-Pay Resolution must be passed by a majority of the votes cast by Shareholders present virtually or by proxy at the Meeting.

The text of the advisory (non-binding) Say-on-Pay Resolution to be submitted to Shareholders at the Meeting is set forth below:

BE IT RESOLVED THAT:

1. the compensation paid to the Corporation’s named executive officers, as disclosed pursuant to Item 402 of Regulation S-K, including the compensation tables and related narrative discussion contained in the proxy statement dated April 20, 2021, is approved on an advisory basis.

Board Recommendation

The Board believes the passing of the Say-on-Pay Resolution is in the best interest of the Corporation and unanimously recommends a vote FOR the passing of the Say-on-Pay Resolution.

PROPOSAL NO. 6—ADVISORY (NON-BINDING) VOTE ON THE FREQUENCY OF FUTURE SHAREHOLDER “SAY-ON-PAY” VOTES

At the Meeting, Shareholders will be asked to vote on how frequently future “say-on-pay” votes should be presented to Shareholders. As required by Section 14A of the Exchange Act, the Corporation must hold an advisory vote on the frequency of presenting “say-on-pay” votes to Shareholders at least once every six years. Although this advisory vote is not binding on the Corporation, the Board will take into account the results of the vote when determining the frequency of future advisory votes on executive compensation.

The Board has determined that holding an advisory vote on executive compensation every one (1) year is the most appropriate alternative for the Corporation. While the Corporation’s executive compensation programs are designed to promote a long-term connection between pay and performance, the Board recognizes that compensation disclosures are made annually. Holding an annual advisory vote on executive compensation would establish the practice of Shareholders providing the Corporation with more direct and immediate feedback on those compensation disclosures. However, Shareholders should note that, because the advisory vote on executive compensation occurs well after the beginning of the compensation year, and because the different elements of the Corporation’s executive compensation programs are designed to operate in an integrated manner and to complement one another, in many cases it may not be appropriate or feasible to change the Corporation’s executive compensation by the time of the following year’s annual meeting of shareholders.

At the Meeting, Shareholders will be asked to consider and, if deemed appropriate, to approve, an advisory (non-binding) resolution in the form set out below:

BE IT RESOLVED THAT:

1. the option of once every 1 year, 2 years or 3 years that receives the greatest number of votes cast for this resolution will be determined to be the preferred frequency with which the Corporation is to hold a non-binding (advisory) shareholder vote to approve the compensation of its named executive officers, as disclosed pursuant to the executive compensation disclosure rules in the Corporation’s proxy statement.

Shareholders may select “1 Year”, “2 Years”, “3 Years” or “Abstain” with respect to Proposal No. 6. Shareholders are not voting to approve or disapprove the Board’s recommendation on Proposal No. 6. The selection that receives the greatest number of votes cast at the Meeting will be deemed to have received the recommendation of the Shareholders and the vote will not be binding on the Board. Abstentions and broker non-votes will not be included in the total votes cast and will not affect the results.

Board Recommendation

The Board unanimously recommends a vote FOR the option of having an advisory (non-binding) vote approving the compensation of the Named Executive Officers once every “1 Year”.

EXECUTIVE COMPENSATION

Information About Our Executive Officers

Aptose's leadership team comprises accomplished industry, financial and clinical research professionals who are dedicated to building a comprehensive anticancer drug pipeline and clinical development programs focused on targeted therapeutics directed against dysregulated oncogenic processes in patients with life. The team includes our Chairman, President and Chief Executive Officer, Dr. William G. Rice, whose biography is listed above; our Chief Business and Strategy Officer, Dr. Jotin Marango; and our Chief Medical Officer, Dr. Rafael Bejar. On March 23, 2021, we announced that Gregory K. Chow, Aptose's Executive Vice President and Chief Financial Officer, was resigning to pursue other opportunities, effective March 26, 2021.

Dr. Jotin Marango, age 42, joined Aptose as Senior Vice President and Chief Business Officer in June 2019 and Chief Business and Strategy Officer in January 2021. Since March 26, 2021, Dr. Marango has assumed Chief Financial Officer duties until a permanent replacement for Mr. Chow is announced. Prior to joining Aptose, from 2017 to 2019, Dr. Marango was a managing director and senior research analyst at Roth Capital Partners covering biotechnology and therapeutics. Dr. Marango joined Roth from H.C. Wainwright & Co., where he worked from 2015 to 2017 and covered hematology, oncology, and pulmonary therapeutics, with a focus on epigenetic and molecularly targeted therapies. Dr. Marango began his career in equity research with Collins Stewart/Canaccord Genuity in 2010. Previously, Dr. Marango also served as Chief Operating Officer at the Samuel Waxman Cancer Research Foundation from 2012 to 2015, where he oversaw academic collaborations in translational therapeutics, as well as venture philanthropy initiatives in drug development. Dr. Marango studied theoretical chemistry and classical literature at Harvard University and later received his M.D. and Ph.D. degrees from the Mount Sinai School of Medicine in New York.

Dr. Rafael Bejar, M.D, Ph.D., age 49, joined Aptose as Senior Vice President and Chief Medical Officer in January 2020. Dr. Bejar is an internationally recognized physician scientist with extensive research and clinical experience in the area of hematologic malignancies. Dr. Bejar joined Aptose from UC San Diego ("UCSD") where he began working in 2012. He continues to serve at UCSD as an Associate Professor of Clinical Medicine, caring for patients and maintaining a research laboratory focused on translational studies of myeloid malignancies and also serves and is an independent consultant as a member of the Independent Data Monitoring Committee for other pharmaceutical companies. At UCSD, he founded the MDS Center of Excellence and led the Hematology Disease Team from 2017 to 2019. There he has directed several clinical studies and served as an advisor for numerous companies including Celgene, Takeda, AbbVie, Astex, Genoptix, Forty Seven, PersImmune, and Daiichi-Sankyo. Outside UCSD, Dr. Bejar sits on the Scientific Advisory Board for the MDS Foundation, is a prior member of the National Comprehensive Cancer Network Guidelines Committee, and has led projects for the International Working Group for MDS. He is frequently invited to speak at national and international meetings and has published articles in a variety of journals including *The New England Journal of Medicine*, *Journal of Clinical Oncology*, *Leukemia*, *Blood*, and *Blood Advances*. Dr. Bejar completed his fellowship at the Dana-Farber Cancer Institute and has been board certified in Hematology and Oncology. He completed his internship in Internal Medicine at the University of Chicago followed by his residency at the Brigham and Women's Hospital in Boston where he later served a Medical Chief Resident and an Instructor in Hematology. He holds an MD degree and Neuroscience PhD from UCSD and a BS in Physics from MIT.

The following discussion covers the compensation arrangements for Dr. Rice, Mr. Chow, Dr. Marango and Dr. Bejar (each, an "NEO" and, collectively the "Named Executive Officers").

Employment Agreements

Aptose entered into an employment agreement with Dr. Rice on October 25, 2013 upon his commencement as Chairman, President, and Chief Executive Officer. This agreement was amended and restated on August 19, 2014. Pursuant to the amended and restated employment agreement, Dr. Rice is entitled to an annual base salary of \$480,000, which amount is reviewed annually by the Board and increased at the Board's discretion, upon the advice of the Compensation Committee. Dr. Rice is also eligible for an annual discretionary bonus of up to 50% of his current base salary. The annual bonus is based on the Corporation's and Dr. Rice's achievement of objectives and milestones to be determined on an annual basis by the Board. Dr. Rice is entitled to receive termination benefits described under "Termination and Change of Control Benefits," below. Dr. Rice also receives employee benefits including, without limitation, participation in the Corporation's 401(k) plan with a 3% non-elective company contribution, participation in Aptose's group health coverage plan and life insurance plan for US employees, 25 days of paid vacation time annually, and an annual automobile allowance of \$18,000. Dr. Rice is subject to certain non-compete restrictions.

Aptose entered into an employment agreement with Mr. Chow upon his commencement as Chief Financial Officer, effective November 29, 2013, which agreement was terminated as a result of Mr. Chow's resignation effective as of March 26, 2021. Pursuant to the employment agreement, Mr. Chow was entitled to an annual base salary of \$315,000, which amount was reviewed annually by the Board and increased at the Board's discretion, upon the advice of the Compensation Committee. Mr. Chow was also eligible for an annual discretionary bonus of up to 40% of his base salary. The annual bonus is based on the Corporation's and Mr. Chow's achievement of objectives and milestones determined on an annual basis by the Board. Mr. Chow's agreement also provided for termination benefits described under "Termination and Change of Control Benefits," below. Mr. Chow also received employee benefits, including, without limitation, participation in any 401(k) plan with a 3% non-elective company contribution, participation in other benefits provided by Aptose to its U.S. based executive officers and other employees, which consisted of life insurance and health benefits, and 20 days of paid vacation time annually and an annual automobile allowance of \$18,000. Mr. Chow is subject to certain non-compete restrictions.

Aptose entered into an employment agreement with Dr. Marango upon his commencement as Chief Business Officer, effective June 3, 2019. Pursuant to the employment agreement, Dr. Marango is entitled to an annual base salary of \$390,000 which amount is reviewed annually by the Board and increased at the Board's discretion, upon the advice of the Compensation Committee. Dr. Marango is also eligible for an annual discretionary bonus of up to 40% of his current base salary. The annual bonus is based on the Corporation's and Dr. Marango's achievement of objectives and milestones to be determined on an annual basis by the Board. Dr. Marango's agreement also provides for termination benefits described under "Termination and Change of Control Benefits," below. Dr. Marango also receives employee benefits, including, without limitation, participation in any 401(k) plan with a 3% non-elective company contribution, participation in other benefits provided by Aptose to its U.S. based executive officers and other employees, which consist to date of life insurance and health benefits, and 20 days of paid vacation time annually. Dr. Marango's is subject to certain non-compete restrictions.

Aptose entered into an employment agreement with Dr. Bejar upon his commencement as Chief Business Officer, effective January 1, 2020. Pursuant to the employment agreement, Dr. Bejar is entitled to an annual base salary of \$400,000 which amount is reviewed annually by the Board and increased at the Board's discretion, upon the advice of the Compensation Committee. Dr. Bejar is also eligible for an annual discretionary bonus of up to 40% of his current base salary. The annual bonus is based on the Corporation's and Dr. Bejar's achievement of objectives and milestones to be determined on an annual basis by the Board. Dr. Bejar's agreement also provides for termination benefits described under "Termination and Change of

Control Benefits,” below. Dr. Bejar also receives employee benefits, including, without limitation, participation in any 401(k) plan with a 3% non-elective company contribution, participation in other benefits provided by Aptose to its U.S. based executive officers and other employees, which consist to date of life insurance and health benefits, and 20 days of paid vacation time annually. Dr. Marango is subject to certain non-compete restrictions.

Compensation Philosophy

The Compensation Committee’s mandate is to review and advise the Board on the recruitment, appointment, performance, compensation, benefits and termination of executive officers. The Compensation Committee also administers and reviews procedures and policies with respect to equity-based compensation plans, employee benefit programs, pay equity and employment equity and reviews executive compensation disclosure where it is publicly disclosed.

Aptose’s executive compensation program is designed to:

- attract and retain qualified, motivated and achievement-oriented individuals by offering compensation that is competitive in the industry and marketplace;
- align executive interests with the interests of Shareholders; and
- ensure that individuals continue to be compensated in accordance with their personal performance and responsibilities and their contribution to the overall objectives of the Corporation.

These objectives are achieved by offering executives and employees a compensation package that is competitive and rewards the achievement of both short-term and long-term objectives of the Corporation. As such, our compensation package consists of three key elements:

- base salary and initial share options;
- short-term compensation incentives to reward corporate and personal performance through potential annual cash bonuses; and
- long-term compensation incentives related to long-term increase in Share value through participation in equity-based compensation plans.

The Compensation Committee reviews each of these items on a stand-alone basis and also reviews compensation as a total package. Adjustments to compensation are made as appropriate following a review of the compensation package as a whole.

Independent Advice

In March 2018, the Compensation Committee retained Radford (an Aon Consulting Company), to provide independent advice to the Compensation Committee. Radford was retained to identify a peer group of companies as well as perform an assessment of the competitiveness of the Corporation’s executive compensation process. Radford did not provide any services to management. The Compensation Committee has sole authority to retain and terminate any compensation consultant to be used to assist it in the evaluation of executive officer compensation. The Compensation Committee has sole authority to approve such consultants’ fees and retention terms and to obtain advice and assistance from internal or external legal, accounting or other advisors.

The Committee conducted an independence assessment for Radford in accordance with the

Committee’s charter and Nasdaq listing standards, considering factors included in the listing standards. The Committee determined, based on an analysis of these factors, that the work of Radford as the independent compensation consultant did not create any conflict of interest.

In addition, in 2020, the Compensation Committee engaged Radford to conduct a detailed assessment of the executive compensation program. Radford concluded, in December 2020, that the executive compensation program was generally aligned with market (between the 50th and the 75th percentile for the cash and equity portions of the compensation package).

Comparator Group

In 2018, the Corporation, with advice from Radford, its independent compensation consultant, reviewed the compensation of its executive officers against that of its compensation peer group. The comparator group takes into account direct competitors for talent, especially for industry specific roles. The comparator group is comprised of 20 publicly traded U.S. biotechnology companies which range in size from approximately 1/3 × to 3× the market capitalization of the Corporation (as of October 2018). The companies comprising the comparator group are as follows:

Comparator Group Companies	
Actinium Pharmaceuticals, Inc.	Merrimack Pharmaceuticals, Inc.
AVEO Pharmaceuticals, Inc.	Mersana Therapeutics, Inc.
Bellicum	Miragen
Calithera Biosciences, Inc.	OncoMed Pharmaceuticals, Inc.
Catalyst Biosciences, Inc.	Pieris Pharmaceuticals, Inc.
Conatus Pharmaceuticals, Inc.	Proteostasis Therapeutics, Inc.
Corvus Pharmaceuticals, Inc.	Rexahn Pharmaceuticals, Inc.
Genocea	Selecta Biosciences, Inc.
Immune Design	Sierra Oncology Inc.
Infinity Pharmaceuticals	Sunesis Pharmaceuticals, Inc.

Pay Positioning

The Corporation endeavors to target total cash compensation (salary and short-term incentive)

somewhat above the 50th percentile of the comparator group, and generally provides long-term incentive opportunities in the 50th to 75th percentile of the comparator group. The Compensation Committee believes this approach aligns executive compensation with the long-term interests of shareholders and with the Corporation's strategy, particularly when relatively few executives are performing multiple executive roles. In 2018, Radford provided detailed information to the Compensation Committee relating to compensation values, pay mix and incentive vehicles at the comparator group companies. In addition, the Compensation Committee considered compensation in relation to executives located in Central and Southern California which are regions of relatively higher cost of living and highly competitive for recruitment and retention. Based on this information and also taking into account experience in the role, scope of the role, performance and retention risk, as further explained below, the Compensation Committee set compensation for the executives for 2018 aligned with the target pay positioning set out above.

Although the Compensation Committee considers Radford's recommendations in its review of executive compensation, the Compensation Committee ultimately makes its own decisions about compensation matters. The Compensation Committee realizes that using a peer benchmark such as the one provided by Radford is neither the only means for gathering and validating market data nor the only criteria for establishing executive compensation. In instances where an executive is uniquely critical to our success, the Compensation Committee may provide compensation in excess of the benchmark of the comparator group companies. Upward or downward variations for base salary and long-term incentives may also occur as a result of the individual's experience level, the balance of the individual's different elements of compensation, market factors and other strategic considerations. The Compensation Committee believes that, given the competitiveness of our industry and our company culture, our base compensation, cash incentives and equity programs must remain flexible, reward the achievement of clearly defined corporate goals. In addition, the Compensation Committee believes that such programs must be sufficient to retain our existing executive officers and to hire new executive officers, when necessary, and that unnecessary turnover at the executive level can have expensive consequences from the perspectives of time lost and capital required.

In 2020, the Board, upon recommendation of the Compensation Committee, proceeded to substantial grants of options and RSUs to retain essential executives and recognize, in addition to the achievement of corporate and executive officer objectives, specific achievements of the executive management team as part of the Corporation's financing activity and advancement of the pipeline into vital clinical activities. More specifically, the Corporation completed in 2019 two public offerings of common shares, raising gross proceeds of \$74.2 million in December and \$21.3 million in June, the net proceeds of which extended the cash runway of the Corporation and are being used to accelerate and expand its clinical trial programs to allow the Corporation to become a true clinical-stage company, treating patients in three distinct clinical programs. The Board determined that the financing and development efforts conducted by the executive management team in 2019 were therefore pivotal to support the pipeline and long-term objectives of the Corporation and contributed to the creation of long-term value, therefore justifying the substantial grant of options and RSUs in 2020 that were atypical when compared to prior years.

Base Salary

In establishing base salaries, the objective of the Compensation Committee is to establish levels that will enable Aptose to attract and retain executive officers that can effectively contribute to the long-term success of the Corporation. Base salary for each executive officer is determined by the individual's skills, abilities, experience, past performance and anticipated future contribution to the success of Aptose. The members of the Compensation Committee use their knowledge of the industry and of industry trends as well as independent third party consultants to assist with the determination of an appropriate compensation package for each executive officer.

Short-Term Compensation Incentives

Short-term compensation incentives motivate our executive officers to achieve specified performance objectives and to reward them for their achievement in the event that those objectives are met. Each year, the Compensation Committee approves the annual corporate objectives encompassing scientific, clinical, regulatory, business and corporate development and financial criteria. The annual cash incentive for the executive officers is based, at least in part, on the level of achievement of these annual objectives, assuming these objectives are still relevant at the time of evaluation.

All corporate and executive officer objectives and short-term incentives are reviewed by the Compensation Committee and approved by the Board.

For each executive officer, during the year ended December 31, 2020, the annual cash incentives ranged from 40% to 50% of base salary.

Cash incentives are determined as soon as practicable after the end of the fiscal year and, for the Named Executive Officers (as defined hereinafter), are included in the Summary Compensation Table in the year in respect of which they are earned.

Short-Term Compensation Incentives - Performance Metrics

The performance of the Named Executive Officers for the period ended December 31, 2020 was measured with respect to the following objectives:

- 1) Achievement of certain milestones for the clinical development of the CG-806 program in CLL/NCL patients;
- 2) Achievement of certain milestones for the clinical development of the CG-806 program in AML patients;
- 3) Achievement of certain milestones for the clinical development of the APTO-253 in AML/MDS patients;
- 4) Achievement of certain milestones related to clinical operations;
- 5) Achievement of certain milestones related to CMC and manufacturing; and
- 6) Metrics related to the improvement of the financial position as well as other activities such as corporate development and strategic activities, competitive positioning and partnering, intellectual property portfolio and human resources, and the recruitment and retention of additional key personnel.

Each of the above objectives is weighted at 30%, 30%, 10%, 5%, 10% and 15% respectively, in relation to assessment of satisfaction of overall corporate objectives and determination of any general corporate bonuses.

Long-Term Incentive Plans

Long-term compensation incentives at Aptose reward an executive's contribution to the attainment of Aptose's long-term objectives, align an executive's performance with the long-term performance of Aptose and to provide an additional incentive for an executive to enhance shareholder value. Long-term

incentive compensation for directors, officers, employees and consultants is reviewed annually and may be accomplished through the grant of share options and of stock-based awards under equity-based compensation plans, including our existing share option plan (the “Share Option Plan”) and 2015 stock incentive plan (the “2015 SIP”), as well as the New Incentive Plan, if approved by shareholders at the Meeting.

In certain cases, executive officers may be granted share options on the commencement of employment with Aptose in accordance with the responsibility delegated to each executive officer for achieving corporate objectives and enhancing shareholder value in accordance with those objectives.

The number of options granted for certain executives of Aptose for the year ended December 31, 2020 was based on achievement of both corporate and executive officer objectives. The Compensation Committee approves the allocation of options, and options are priced using the closing market price of the Shares on the TSX or on Nasdaq, as applicable, on the last trading day prior to the grant. Options to purchase Shares granted under the Share Option Plan expire ten years from the date of grant and vest over a term determined by the Compensation Committee, which is over four years for options granted during 2020. The Compensation Committee considers previous grants of options when considering new grants of options.

The number of RSUs granted for certain executives of Aptose for the year ended December 31, 2020 was based on achievement of both corporate and executive officer objectives and the need to retain such executives. The Board, upon recommendation of the Compensation Committee, approves the grant of RSUs, and RSUs are valued using the closing market price of the Shares on the TSX or Nasdaq, as applicable, on the last trading day prior to the grant. RSUs granted pursuant to the 2015 SIP vest over a term determined by the Board, upon recommendation of the Compensation Committee. The Board and the Compensation Committee take into account other elements of compensation when considering new grants of RSUs.

Stock and option awards may be subject to accelerated vesting in the event of termination or change of control, see “Termination and Change of Control Benefits.”

Other Benefits

In certain cases, the Compensation Committee may recommend inclusion of automobile allowances, fitness allowances and the payment of certain professional dues as a component of a competitive remuneration package for executives.

Hedge or Offset Instruments

Named Executive Officers, other Aptose employees, and directors are not restricted from purchasing financial instruments that are designed to hedge or offset a decrease in market value of the Corporation’s equity securities granted as compensation or held, directly or indirectly, by Named Executive Officers or directors, including, for greater certainty, prepaid variable forward contracts, equity swaps, collars, or units of exchange funds.

Summary Compensation Table

The following table details the compensation information for the fiscal years ended December 31, 2019 and December 31, 2020 of the Corporation for the Named Executive Officers. All amounts presented in the following tables are as recorded in US dollars.

Name and Principal Position	Year	Salary (\$)	Stock awards ⁽¹⁾ (\$)	Option awards ⁽²⁾ (\$)	Non-equity incentive plan compensation (\$)	All other compensation ⁽³⁾ (\$)	Total compensation (\$)
Dr. William G. Rice Chairman, President and Chief Executive Officer	2020	581,519	2,196,000	9,327,516	290,760	26,550	12,422,345
	2019	561,854	Nil	516,298	407,344	26,400	1,511,896
Mr. Gregory K. Chow Chief Operating Officer and Chief Financial Officer	2020	404,673	1,647,000	5,596,510	161,869	26,550	7,836,602
	2019	390,988	Nil	387,224	244,368	26,400	1,048,980
Dr. Jotin Marango Chief Business and Strategy Officer	2020	403,650	878,400	1,865,503	161,460	8,550	3,317,563
	2019	217,500	160,000	426,057	124,002	900	928,459
Dr. Rafael Bejar Senior Vice President and Chief Medical Officer	2020	400,000	-	2,466,939	160,000	6,923	3,033,862
	2019 ⁽⁴⁾	-	-	-	-	-	-

- (1) The dollar amounts in this column reflect the aggregate grant date fair value of all stock awards granted during the indicated fiscal year. These amounts have been calculated in accordance with ASC 718, excluding the effect of estimated forfeitures. Assumptions used in the calculation of these amounts are included in note 12 to our audited consolidated financial statements included in the Corporation's Annual Report on Form 10-K for the fiscal year ended December 31, 2020 (the "10-K"). These amounts do not necessarily correspond to the actual value recognized or that may be recognized by the NEOs. On March 10, 2020, the following RSUs were granted to NEOs: 300,000 RSUs to Dr. Rice, 225,000 RSUs to Mr. Chow and 120,000 RSUs to Dr. Marango, with an initial vesting period of three months which was extended to six months, and with a grant date value of \$7.32 per share. Stock awards are subject to the executives' continued employment with the Corporation. All stock awards issued to Dr. Rice, Mr. Chow, Dr. Marango and Dr. Bejar may be subject to accelerated vesting following termination of employment. See "Termination and Change of Control Benefits" below.
- (2) The dollar amounts in this column reflect the aggregate grant date fair value of all share option awards granted during the indicated fiscal year. These amounts have been calculated in accordance with ASC 718, using the Black-Scholes option-pricing model and excluding the effect of estimated forfeitures. Assumptions used in the calculation of these amounts are included in note 12 to our audited consolidated financial statements included in the Corporation's 10-K. These amounts do not necessarily correspond to the actual value recognized or that may be recognized by the NEOs.
- During the year ended December 31, 2020 the following share options were granted to NEOs: 2,000,000 share options for Dr. Rice, 1,200,000 share options for Mr. Chow, 400,000 share options for Dr. Marango and 200,000 share options for Dr. Bejar at an exercise price of \$6.91 per share. Dr. Bejar was also granted 400,000 share options at an exercise price of \$5.67. All options granted will vest over four years. Share options are subject to the executives' continued employment with the Corporation and have a maximum term of 10 years. All share option grants issued to Dr. Rice, Mr. Chow, Dr. Marango and Dr. Bejar may be subject to accelerated vesting following termination of employment. See "Termination and Change of Control Benefits" below.
- (3) The dollar amounts in this column reflect the Corporation's contributions to the executives' accounts in our 401(k) plan and car allowances. The contributions to our executives' accounts in our 401(k) plan were as follows: for 2019: \$8,400 for each of Dr. Rice and Mr. Chow and \$900 for Dr. Marango and for 2020: \$8,550 for each of Dr. Rice, Mr. Chow and Dr. Marango and \$6,923 for Dr. Bejar. Car allowances were as follows: for 2019, \$18,000 to each of Dr. Rice and Mr. Chow and for 2020, \$18,000 to each of Dr. Rice and Mr. Chow.
- (4) Dr. Bejar joined Aptose on January 1, 2020.

Outstanding Equity Awards at Fiscal Year-End

Name and Principal Position	Option-based Awards				Share-based awards	
	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option exercise price (\$)	Option expiration date	Number shares or units of stock that have not vested (#)	Market value of shares or units of stock that have not vested (\$)
Dr. William G. Rice Chairman, President and Chief Executive Officer	35,417 65,136 5,281 140,000 396,129 120,000 60,000 83,334 41,667 300,000 266,668 200,000 Nil	Nil Nil Nil Nil Nil Nil Nil 16,666 ⁽¹⁾ 8,333 ⁽²⁾ Nil 133,332 ⁽³⁾ 200,000 ⁽⁴⁾ 2,000,000 ⁽⁶⁾	2.73 ⁽⁷⁾ 5.75 ⁽⁷⁾ 5.46 ⁽⁷⁾ 4.71 ⁽⁷⁾ 4.48 ⁽⁷⁾ 5.46 ⁽⁷⁾ 3.00 ⁽⁷⁾ 1.19 ⁽⁷⁾ 1.03 2.80 3.07 1.91 6.91	Oct 27, 2023 Dec 10, 2023 Jan 29, 2024 Apr 10, 2024 Jun 15, 2024 Jun 9, 2025 Mar 30, 2026 Mar 28, 2027 Jun 6, 2027 Jan 19, 2028 Jan 22, 2028 Jan 2, 2029 Jan 30, 2030	Nil	N/A
Mr. Gregory K. Chow Chief Operating Officer and Chief Financial Officer	35,417 35,417 35,417 22,083 64,167 60,000 60,000 83,334 41,667 150,000 233,334 150,000 Nil	Nil Nil Nil Nil Nil Nil Nil 16,666 ⁽¹⁾ 8,333 ⁽²⁾ Nil 116,666 ⁽³⁾ 150,000 ⁽⁴⁾ 1,200,000 ⁽⁶⁾	7.35 ⁽⁷⁾ 5.75 ⁽⁷⁾ 4.71 ⁽⁷⁾ 4.48 ⁽⁷⁾ 4.15 ⁽⁷⁾ 5.46 ⁽⁷⁾ 3.00 ⁽⁷⁾ 1.19 ⁽⁷⁾ 1.03 2.80 3.07 1.91 6.91	Nov 4, 2023 Dec 10, 2023 Apr 10, 2024 Jun 15, 2024 Jul 18, 2024 Jun 9, 2025 Mar 30, 2026 Mar 28, 2027 Jun 6, 2027 Jan 19, 2028 Jan 22, 2028 Jan 2, 2029 Jan 30, 2030	Nil	N/A
Dr. Jotin Marango Chief Business and Strategy Officer	160,000 Nil	160,000 ⁽⁵⁾ 400,000 ⁽⁶⁾	2.00 6.91	Jun 3, 2029 Jan 30, 2030	Nil	N/A
Dr. Rafael Bejar Senior Vice President and Chief Medical Officer	Nil Nil	400,000 ⁽⁸⁾ 200,000 ⁽⁶⁾	5.67 6.91	Jan 1, 2030 Jan 30, 2030	Nil	N/A

1. Unexercisable options vest on March 28, 2021.

2. Unexercisable options vest on June 6, 2021.

3. Unexercisable options vest as follows: 50% vest on January 22, 2021 and 50% vest on January, 2022..

4. Unexercisable options vest as follows: 33.33 % vest on January 2, 2021, 33.33% vest on January 22, 2022, and 33.33% vest on January 22, 2023.

5. Unexercisable options vest as follows: 33.33 % vest on June 3, 2021, 33.33% vest on June 3, 2022, and 33.33% vest on June 3, 2023.

6. Unexercisable options vest as follows: 50% vest on January 30, 2021, 16.67 % vest on January 30, 2022, 16.67% vest on January 30, 2023, and 16.67% vest on January 30, 2024.
7. Converted from the Canadian exercise price at the conversion rate of 0.7851 Canadian dollars per U.S. dollar.
8. Unexercisable options vest as follows: 50% vest on January 1, 2021, 16.67 % vest on January 1, 2022, 16.67% vest on January 1, 2023, and 16.67% vest on January 1, 2024.

Retirement Benefits

The Corporation maintains a 401(k) plan in which eligible employees of the Corporation may choose to participate, including the Named Executive Officers. The Corporation makes non-elective contributions of 3% of compensation for all eligible employees, subject to the maximum allowed by the Internal Revenue Code Section 401(k).

Termination and Change of Control Benefits

The employment agreements of Dr. Rice, Dr. Marango, and Dr. Bejar, as well as Mr. Chow prior to his resignation effective March 26, 2021, provide that if their employment is terminated by the Corporation other than for “cause” (defined as (i) theft, fraud, dishonesty or material misconduct of the executive involving the property, business or affairs of the Corporation, which results, or could result in material harm to the Corporation, (ii) any material breach by the NEO of any term of his employment agreement, or (iii) any material breach of the Employee Information and Inventions Agreement (as defined in each employment agreement)), or if the Named Executive Officer resigns for “good reason” (defined as a material reduction in Executive Base Salary (as defined in each employment agreement), unless pursuant to a salary reduction program, a material reduction in the NEO’s duties or the relocation of the NEO’s principal place of employment) each of Dr. Rice, Mr. Chow, Dr. Marango and Dr. Bejar shall be entitled to a payment equivalent to 12 months of their respective annual base salaries at the time of termination (Dr. Rice’s December 31, 2020 annual base salary represents \$581,519, Mr. Chow’s December 31, 2020 annual base salary represents \$404,673, Dr. Marango’s December 31, 2020 base salary represents \$403,650 and Dr. Bejar’s December 31, 2020 base salary represents \$400,000), plus an amount equal to the average bonus remuneration received from the Corporation during the last three years of employment completed prior to the termination date, prorated based on the number of days the executive worked during the year of the termination. In addition, the employment agreements of Dr. Rice, Mr. Chow, Dr. Marango and Dr. Bejar provide that certain payments related to health benefits will continue to be made for a period of 12 months following termination of their employment.

The employment agreements of Dr. Rice, Mr. Chow and Dr. Marango provide that, in the event their employment with the Corporation is terminated within three months immediately preceding or 12 months immediately following the consummation of a “change of control” (defined as the consummation of any of the following: (a) the acquisition of the Corporation by another entity by means of any transaction or series of related transactions to which the Corporation is a party, (b) a sale, lease or other conveyance of all or substantially all of the assets of the Corporation, or (c) an liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary), each of Dr. Rice, Mr. Chow and Dr. Marango would be eligible, subject to certain conditions, to receive a payment equivalent to 18 months of their annual base salaries at the time of termination, plus an amount equal to 150% of the average bonus remuneration received from the Corporation during the last three years of employment completed prior to the termination date, prorated based on the number of days the executive worked during the year of the termination, as well as continuation of the payments related to health benefits for a period of 12 months following the termination following a change of control.

The employment agreements of Dr. Rice, Mr. Chow, Dr. Marango and Dr. Bejar provide that in

the event of their termination, other than for cause, the vesting and exercisability of all then outstanding unvested share options, RSUs or other equity awards then held by such NEO become immediately vested and exercisable and shall remain exercisable as set forth in the applicable award documents.

DIRECTOR COMPENSATION

Overview

The Compensation Committee makes recommendations regarding compensation payable to our non-employee directors to the entire Board, which then makes final decisions regarding such compensation.

Cash Compensation

Non-employee directors are entitled to an annual fee of \$60,000 with no per meeting fees. The Lead Director is entitled to an additional annual fee of \$40,000. The chair of each committee is entitled to an additional annual fee of \$15,000, with the exception of the chair of the Audit Committee who is entitled to an additional annual fee of \$20,000. Each committee member is entitled to receiving an annual fee of \$10,000 per committee. All fees are paid in quarterly installments.

Non-employee directors are reimbursed for any out-of-pocket travel expenses incurred in order to attend meetings. Executive directors are not entitled to directors' compensation.

Option Awards

Upon appointment to the Board a non-employee director will be entitled to an option grant of 25,000 options under the Share Option Plan and each year thereafter are eligible for an additional grants at the beginning of the fiscal year. The options vest 50% after one year, and 25% for each of the second and third years. If a director resigns, the director will have 90-days to exercise all vested and unexercised options from the date resignation.

The following table details the compensation received by each non-employee director for the year ended December 31, 2020:

Name	Fees earned or paid in cash (\$)	Option awards ⁽¹⁾⁽²⁾ (\$)	Total (\$)
Carol G. Ashe	80,000 ⁽³⁾	540,855	620,855
Caroline M. Loewy	80,000 ⁽⁴⁾	540,855	620,855
Dr. Denis Burger	125,000 ⁽⁵⁾	985,470	1,110,470
Dr. Mark Vincent	75,000 ⁽⁶⁾	934,666	1,009,666
Mr. Warren Whitehead	80,000 ⁽⁷⁾	927,841	1,007,841
Dr. Erich Platzer	70,000 ⁽⁸⁾	867,318	937,318

- (1) The dollar amounts in this column reflect the aggregate grant date fair value of all share option awards granted during the indicated fiscal year. These amounts have been calculated in accordance with ASC 718, using the Black-Scholes option-pricing model and excluding the effect of estimated forfeitures. Assumptions used in the calculation of these amounts are included in note 11 to our audited consolidated financial statements

included in the Corporation's Annual Report on Form 10-K. These amounts do not necessarily correspond to the actual value recognized or that may be recognized by the non-employee directors.

During the year ended December 31, 2020, the following share options were granted to Aptose directors: 115,000 share options for Ms. Ashe, 115,000 share options for Ms. Loewy, 210,334 share options for Dr. Burger, 204,000 share options for Dr. Vincent, 202,500 share options for Mr. Whitehead and 185,000 share options for Dr. Platzer. All options granted will vest over three years.

- (2) The aggregate number of shares subject to outstanding share options held by each of the non-employee directors listed in the table above as of December 31, 2020 was as follows: 180,000 for Ms. Ashe, 180,000 for Ms. Loewy, 370,668 for Dr. Burger, 358,083 for Dr. Vincent, 310,000 Mr. Whitehead and 320,000 for Dr. Platzer.
- (3) Ms. Ashe received this amount for her services as director on the Board and as a member of the Board's Corporate Governance and Nominating Committee and Compensation Committee.
- (4) Ms. Loewy received this amount for her services as director on the Board and as a member of the Board's Corporate Governance and Nominating Committee and Audit Committee.
- (5) Dr. Burger received this amount for his services as lead director on the Board, as Chair of the Board's Compensation Committee and as a member of the Board's Audit Committee.
- (6) Dr. Vincent received this amount for his services as director on the Board and as Chair of the Board's Corporate Governance and Nominating Committee.
- (7) Mr. Whitehead received this amount for his services as director on the Board and as Chair of the Board's Audit Committee.
- (8) Dr. Platzer received this amount for his services as director on the Board and as a member of the Board's Compensation Committee.

EQUITY COMPENSATION PLAN INFORMATION

General

As of December 31, 2020, the total number of Shares subject to outstanding awards and available for issuance by the Corporation under the Share Option Plan and the 2015 SIP was 15,554,303. The current maximum number of Shares reserved for issuance collectively under the Share Option Plan and any other security based compensation arrangement may not exceed 17.5% of the Corporation's issued and outstanding Shares. As of December 31, 2020, there were outstanding options to purchase 11,941,011 Shares issued under the Share Option Plan, representing 13.43% of the issued and outstanding Shares of the Corporation and Nil RSUs issued and outstanding under the 2015 SIP, representing 0.0% of the issued and outstanding Shares of the Corporation. Therefore, 3,613,292 Shares remained available for future issuance under the Share Option Plan and the 2015 SIP, representing 4.07% of the issued and outstanding Shares of the Corporation.

New Incentive Plan

On April 20, 2021, the Board unanimously approved and adopted, subject to the approval of the Shareholders, the New Incentive Plan.

For a summary of the terms of the New Incentive Plan, see “*Proposal No. 3 – Adoption of the Corporation’s 2021 Incentive Plan.*”

The Corporation currently maintains its existing Share Option Plan and 2015 SIP. If the New Stock Incentive Plan is approved by Shareholders, no further grants will be made under the Share Option Plan or 2015 SIP, though existing grants under the Share Option Plan will continue in effect in accordance with their terms.

Share Option Plan

The Share Option Plan was established to advance the interests of Aptose by:

- providing Eligible Persons (as defined below) with additional incentives;
- encouraging stock ownership by Eligible Persons;
- increasing the interest of Eligible Persons in the success of Aptose;
- encouraging Eligible Persons to remain loyal to Aptose; and
- attracting new Eligible Persons to Aptose.

The Compensation Committee, as authorized by the Board, administers the Share Option Plan. The maximum total number of Shares available for issuance from treasury under the Share Option Plan, together with the 2015 SIP and any other security based compensation arrangement, is 17.5% of the Corporation’s issued and outstanding Shares at any given time. Further to the approval of the New Incentive Plan by Shareholders, such rolling limit will no longer apply and the Share Option Plan will no longer make new option grants available under the Share Option Plan upon the exercise of options previously granted. A copy of the Share Option Plan was filed on SEDAR at www.sedar.com on June 12, 2015.

Under the Share Option Plan, options may be granted to any executive officer, employee, subsidiary of an executive officer or employee, or consultant or consultant entity (“Eligible Persons”). The exercise price of options granted under the Share Option Plan is established by the Board and will be equal to the closing market price of the Shares on the TSX on the last trading day preceding the date of grant. If there is no trading on that date, the exercise price will be the average of the bid and ask on the TSX on the last trading date preceding the date of grant. If not otherwise determined by the Board, an option granted under the Share Option Plan will vest as to 50% on the first anniversary of the date of grant of the option and an additional 25% on the second and third anniversaries after the date of grant. The Board fixes the term of each option when granted, but such term may not be greater than 10 years from the date of grant. If the date on which an option expires pursuant to an option agreement occurs during, or within 10 days after the last day of, a black out period or other restriction period imposed on the trading of Shares by the Corporation, the expiry date for the option will be the last day of the 10-day period. Options are personal to the participant and a participant may not transfer an option except in accordance with the Share Option Plan.

The Share Option Plan does not limit insider participation and does not provide a maximum number of Shares which may be issued to an individual under the Share Option Plan. The Corporation did not provide financial assistance to any Eligible Person to facilitate the exercise of Options during the year ended December 31, 2020.

The Board may, in its sole discretion, amend, suspend or terminate the Share Option Plan or any portion of it at any time in accordance with applicable legislation, without obtaining the approval of Shareholders. Such amendments could include: (i) amendments of a “housekeeping” nature; (ii) a change to the vesting provisions of options granted pursuant to the Share Option Plan; and (iii) a change to the

termination provisions of options granted under the Share Option Plan which does not entail an extension beyond the original expiry date.

Any amendment to any provision of the Share Option Plan is subject to any required regulatory or Shareholder approval. The Corporation is, however, required to obtain the approval of the Shareholders for any amendment related to (i) the maximum number of Shares reserved for issuance under the Share Option Plan, and under any other security based compensation arrangements of the Corporation; (ii) a reduction in the exercise price for options held by insiders of the Corporation; and (iii) an extension to the term of options held by insiders of the Corporation.

If an option holder is terminated without cause, resigns or retires, each option that has vested will cease to be exercisable three months after the option holder's termination date. Any portion of an option that has not vested on or prior to the termination date will expire immediately. If an option holder is terminated for cause, each option that has vested will cease to be exercisable immediately upon the Corporation's notice of termination. Any portion of an option that has not vested on or prior to the termination date will expire immediately.

The Corporation is proposing for shareholder approval in this proxy statement the New Stock Incentive Plan. If the New Stock Incentive Plan is approved, no further grants will be made under the Share Option Plan or the 2015 SIP, though existing grants under the Share Option Plan will continue in effect in accordance with their terms.

2015 Stock Incentive Plan

The Corporation adopted the 2015 SIP following shareholder approval on June 10, 2015. Pursuant to the 2015 SIP, the Board may grant stock-based awards comprised of RSUs or dividend equivalent (the "Dividend Equivalents" and, together with the RSUs, the "2015 SIP Awards") to employees, officers, consultants, independent contractors, advisors and non-employee directors of the Corporation or any affiliate (the "2015 SIP Participants"). A copy of the 2015 SIP was filed on SEDAR at www.sedar.com on June 12, 2015.

The maximum total number of shares available for issuance under the 2015 SIP and any other security based compensation arrangement of the Corporation (including the Share Option Plan) is 17.5% of the Corporation's issued and outstanding Shares at any given time. Since the adoption of the 2015 SIP, an aggregate of 1,025,000 RSUs have been granted and converted into Shares in accordance with their terms and there are currently no RSUs outstanding under the 2015 SIP.

Under the 2015 SIP, RSUs are subject to such restrictions as the Board may impose (including, without limitation, any limitation on the right to receive any dividend or other right or property with respect thereto), which restrictions may lapse separately or in combination at such time or times, in such instalments or otherwise as the Board may deem appropriate; provided, however, that the RSUs may not vest until at least 3 months after the date of grant.

Under the 2015 SIP, the Board may also grant Dividend Equivalents to 2015 SIP Participants under which the Participant shall be entitled to receive payments (in cash, Shares, other securities, other 2015 SIP Awards or other property as determined in the discretion of a committee or subcommittee of the Board appointed from time to time by the Board to administer the 2015 SIP) equivalent to the amount of cash dividends paid by the Corporation to holders of Shares with respect to a number of shares determined by the Board.

The 2015 SIP does not limit insider participation and does not provide a maximum number of Shares which may be issued to an individual under the 2015 SIP. However, no director of the Corporation who is not also an employee of the Corporation or an affiliate may be granted any 2015 SIP Awards that exceed in the aggregate \$150,000 (such value computed as of the date of grant in accordance with applicable financial accounting principles) in any calendar year.

Subject to the express provisions of the 2015 SIP and to applicable law, the Board shall have full power and authority to: (i) designate 2015 SIP Participants; (ii) determine the type of 2015 SIP Awards to be granted to each 2015 SIP Participant under the 2015 SIP and the number of Shares to be covered by each 2015 SIP Award; (iii) determine the terms and conditions of any 2015 SIP Award or award agreement, including any terms relating to the forfeiture of any 2015 SIP Award and the forfeiture, recapture or disgorgement of any cash, Shares or other amounts payable with respect to any 2015 SIP Award; (iv) amend the terms and conditions of any 2015 SIP Award or award agreement, subject to the limitations under Section 7 of the 2015 SIP; and (v) accelerate the exercisability of any 2015 SIP Award or the lapse of any restrictions relating to any 2015 SIP Award, subject to the limitations in Section 7 of the 2015 SIP.

Except as otherwise determined under the 2015 SIP, no 2015 SIP Award and no right under such 2015 SIP Award shall be transferable by a 2015 SIP Participant other than by will or by the laws of descent and distribution, and no 2015 SIP Award or right under any such 2015 SIP Award may be pledged, alienated, attached or otherwise encumbered.

The Board may from time to time amend, suspend or terminate the 2015 SIP, and the Board may amend or alter any previously granted 2015 SIP Award, as applicable, without obtaining the approval of Shareholders in order to: (i) correct any defect, supply any omission or reconcile any inconsistency in the 2015 SIP or in any 2015 SIP Award or award agreement in the manner and to the extent it shall deem desirable to implement or maintain the effectiveness of the 2015 SIP; (ii) amend the eligibility for, and limitations or conditions imposed upon, participation in the 2015 SIP; (iii) make changes that are necessary or desirable to comply with applicable laws, rules, regulations and policies of any applicable governmental entity or stock exchange; (iv) amend any terms relating to the administration of the 2015 SIP, including the terms of any administrative guidelines or other rules related to the 2015 SIP; or (v) make any other amendment, whether fundamental or otherwise, not requiring Shareholders' approval under TSX Company Manual, the rules or regulations of the United States SEC or any other securities exchange that are applicable to the Corporation.

Prior approval of the Shareholders shall be required for any amendment to the 2015 SIP or a 2015 SIP Award that would: (i) require shareholder approval under the TSX Company Manual, the rules or regulations of the SEC or any other securities exchange that are applicable to the Corporation; (ii) increase the maximum number of shares authorized under the 2015 SIP; (iii) increase the annual limit on 2015 SIP Awards granted to non-employee directors; or (iv) amend the amendment provision of the 2015 SIP.

Except as otherwise determined under the 2015 SIP, upon a 2015 SIP Participant's termination of employment or resignation or removal as a Director during the applicable restriction period, all RSUs held by such 2015 SIP Participant at such time shall be cancelled by the Corporation; provided, however, that the committee or subcommittee of the Board appointed by the Board from time to time to administer the 2015 SIP may waive in whole or in part any or all remaining restrictions with respect to RSUs.

The Corporation is proposing for shareholder approval in this proxy statement the New Stock Incentive Plan. If the New Stock Incentive Plan is approved, no further grants will be made under the Share Option Plan or the 2015 SIP, though existing grants under the Share Option Plan will continue in effect in accordance with their terms. There are currently no RSUs outstanding under the 2015 SIP.

Employee Share Purchase Plan

We have an Employee Share Purchase Plan, which has been inactive for several years and will be replaced by the ESPP if the ESPP Resolution is approved at the Meeting. The Employee Share Purchase Plan provided a means by which employees of the Corporation and its affiliates may purchase Shares on the stock market at a 15% discount through accumulated payroll deductions. Eligible participants in the Employee Share Purchase Plan included all employees, including executive officers, who work at least 20 hours per week and were customarily employed by the Corporation or an affiliate of the Corporation for at least six months per calendar year. Generally, each offering was of three months' duration with purchases occurring every quarter. Participants could authorize payroll deductions of up to 15% of their base compensation for the purchase of Shares under the Employee Share Purchase Plan.

During the year ended December 31, 2020, Named Executive Officers, as a group, and employees did not purchase any Shares pursuant to the Employee Share Purchase Plan. Since June 1, 2013, there have been no Shares purchased pursuant to the Employee Share Purchase Plan.

Equity Compensation Plan Information

The following table sets forth certain details as at the end of the year ended December 31, 2020 with respect to compensation plans pursuant to which equity securities of the Corporation are authorized for issuance.

Plan Category	Number of Shares to be issued upon exercise of outstanding options (a)	Weighted- average exercise price of outstanding options (b)	Number of Shares remaining available for future issuance under the equity compensation plans (Excluding Shares reflected in Column (a)) ⁽¹⁾
Equity compensation plans approved by security holders	11,941,011	\$4.97	3,613,292
Equity compensation plans not approved by security holders	-	-	-
Total	11,941,011	\$4.97	3,613,292

- Includes share option awards, RSUs, and Dividend Equivalents that may be awarded under our Share Option Plan and 2015 SIP as at December 31, 2020. There are no shares subject to outstanding rights to purchase or shares remaining issuable under our Employee Stock Purchase Plan as at December 31, 2020. Does not include additional shares whose issuance is subject to shareholder approval under Proposals 3 and 4.

Securities issuable under equity compensation plans as a percentage of outstanding Shares

The following table provides information on the securities issuable collectively under the Share Option Plan and 2015 SIP, expressed as a number and as a percentage of the Shares as of December 31, 2020:

Equity Compensation Plan		Maximum number of securities issuable under the plans ⁽¹⁾	Total number of securities awarded and outstanding under the plans	Total number of securities available for grant under the plans
Share Option Plan and 2015 SIP	Number	15,554,304	11,941,011	3,613,292
	Percentage of outstanding Shares ⁽²⁾	17.5%	13.4%	4.1%

- (1) The maximum total number of shares available for issuance under all the security based compensation arrangements of the Corporation is 17.5%. Accordingly, the number of securities issuable, outstanding and available under the Share Option Plan and the 2015 SIP are represented together.
- (2) As of December 31, 2020, there were 88,881,737 Shares issued and outstanding.

Annual Burn Rate

The following table provides the annual burn rate associated with the Share Option Plan and the 2015 SIP for each of the Corporation's three most recent fiscal years:

Equity Compensation Plan	Fiscal year	Number of securities granted under the plan ⁽¹⁾	Weighted average number of securities outstanding ⁽²⁾	Annual burn rate ⁽³⁾
Share Option Plan	2020	6,361,834	81,836,545	7.77%
	2019	2,160,050	50,158,936	4.31%
	2018	2,319,500	33,391,815	6.95%
2015 SIP	2020	645,000	81,836,545	0.79%
	2019	80,000	50,158,936	0.16%
	2018	150,000	33,391,815	0.45%

- (1) Corresponds to the number of securities granted under the plan in the applicable fiscal year.
- (2) The weighted average number of securities outstanding during the period corresponds to the number of securities outstanding at the beginning of the period, adjusted by the number of securities repurchased or issued during the period, and multiplied by a time-weighting factor.
- (3) The annual burn rate percent corresponds to the number of securities granted under the plan divided by the weighted average number of securities outstanding.

INTEREST OF CERTAIN PERSONS IN MATTERS TO BE ACTED UPON

None of the directors or executive officers of the Corporation, none of the persons who have been directors or executive officers of the Corporation at any time since January 1, 2020, none of the proposed nominees for election as a director of the Corporation and none of the associates or affiliates of any of the foregoing has any material interest, direct or indirect, by way of beneficial ownership of securities or otherwise, in any matter scheduled to be acted upon at the Meeting other than the election of directors.

INTEREST OF RELATED PERSONS IN TRANSACTIONS

For the last two completed fiscal years, no director, proposed director, executive officer, or immediate family member of a director, proposed director or executive officer nor, to the knowledge of our directors or executive officers, after having made reasonable inquiry, any person or company who beneficially owns, directly or indirectly, Shares carrying more than 5% of the voting rights attached to all Shares outstanding at the date hereof, or any immediate family member thereof, had any material interest, direct or indirect, in any transaction or proposed transaction of the Corporation which involves an amount exceeding the lesser of \$120,000 or one percent of the average of the Corporation's total assets at year-end for the last two completed fiscal years.

HOUSEHOLDING OF ANNUAL PROXY MATERIALS

Some banks, brokers and other nominee record holders may be participating in the practice of “householding” proxy statements and annual reports. This means that only one copy of our Notice of Internet Availability of Proxy Materials, proxy materials or annual report to Shareholders may have been sent to multiple Shareholders in each household unless otherwise instructed by such Shareholders. We will deliver promptly a separate copy of these documents to any Shareholder upon written or oral request to our Chief Business and Strategy Officer and Corporate Secretary at Aptose Biosciences Inc., Suite 120, 12770 High Bluff Drive, San Diego, California, telephone: 858-926-2730. Any Shareholder who wants to receive separate copies of our Notice of Internet Availability of Proxy Materials, proxy materials or annual report to Shareholders in the future, or any Shareholders who is receiving multiple copies and would like to receive only one copy per household, should contact the Shareholder’s bank, broker, or other nominee record holder, or the Shareholder may contact us at the above address and phone number.

INDEBTEDNESS

As of the date hereof, there is no indebtedness owing to the Corporation by any employees, officers or directors of the Corporation. The Corporation did not provide financial assistance to any employees, officers or directors for the purchase of securities during the year ended December 31, 2020 or from January 1, 2021 to the date hereof.

DIRECTORS AND OFFICERS’ LIABILITY

We purchase and maintain liability insurance for the benefit of directors and officers to cover any liability incurred by such person in such capacities. The policy provides for coverage in the amount of \$35,000,000. The annual premium payable by the Corporation for directors’ and officers’ liability insurance for the year ended December 31, 2020 was \$2.1 million.

MANAGEMENT CONTRACTS

The management functions of the Corporation are not, in any way, performed in a substantial degree by a person or persons other than the directors or the executive officers of the Corporation.

ADDITIONAL INFORMATION

Additional information relating to us, including our most current Annual Report on Form 10-K (together with documents incorporated therein by reference), our consolidated financial statements for the year ended December 31, 2020, the report of the independent registered public accounting firm thereon, and management’s discussion and analysis of our financial condition and results of operations for the year ended December 31, 2020 can be found by accessing the SEC’s EDGAR filing database at www.sec.gov and on SEDAR at www.sedar.com Copies of those documents are available upon written request to the Chief Business and Strategy Officer and Corporate Secretary at Aptose Biosciences Inc., Suite 120, 12770 High Bluff Drive, San Diego, California, free of charge to our securityholders. Our financial information is provided in our consolidated financial statements for the year ended December 31, 2020 and management’s discussion and analysis of our financial condition and results of operations for the year ended December 31, 2020.

DIRECTORS' APPROVAL

The contents and sending of this Proxy Statement have been approved by our directors.

(signed) William G. Rice, Ph.D.
Chairman, President and Chief Executive Officer
April 20, 2021

APPENDIX A

APTOSE BIOSCIENCES INC.

BOARD MANDATE

Purpose

The board of directors (the “Board”) of Aptose Biosciences Inc. (the “Corporation”) is responsible for the proper stewardship of the Corporation. The Board is mandated to represent the shareholders to select the appropriate Chief Executive Officer (“CEO”), assess and approve the strategic direction of the Corporation, ensure that appropriate processes for risk assessment, management and internal control are in place, monitor management performance against agreed bench marks, and assure the integrity of financial reports.

Membership and Reporting

1. A majority of the directors of the Board will be “independent” as defined by National Instrument 58-101 — *Disclosure of Corporate Governance Practices* (“NI 58-101”), U.S. securities laws and applicable stock exchange rules. The Board will have no more than the maximum set out in the Corporation’s articles and by-laws, which maximum number the Board will reassess from time to time having consideration for the particular needs of the Corporation.
2. Appointments to the Board will be reviewed on an annual basis. The Corporate Governance and Nominating Committee, in consultation with the CEO, is responsible for identifying and recommending new nominees with appropriate skills to the Board.
3. The Board will report to the shareholders of the Corporation.

Terms of Reference

Meetings

1. The Board will meet as required, but at least once quarterly.
2. The independent directors will meet as required, without the non-independent directors and members of management, but at least once quarterly.

Meeting Preparation and Attendance

3. In connection with each meeting of the Board and each meeting of a committee of the Board of which a director is a member, each director will:
 - (a) review thoroughly the materials provided to the directors in connection with the meeting and be adequately prepared for the meeting; and
 - (b) attend each meeting in person, by phone or by video-conference depending on the format of the meeting, to the extent practicable.

Corporate Planning and Performance

4. The Board will:

- (a) adopt a strategic planning process and approve a strategic plan each year; and
- (b) approve and monitor the operational plans and budgets of the Corporation submitted by management at the beginning of each fiscal year.

In establishing corporate performance objectives, the Board will:

- (a) ensure that it has adequate opportunity and information available to it to gain knowledge of the business and the industry sufficient to make fully informed decisions and to adopt meaningful and realistic long-term and short-term strategic objectives for the Corporation. This may include the opportunity for the Board to meet from time to time with industry, medical and scientific experts in related fields of interest;
- (b) ensure that effective policies and processes are in place relating to the proper conduct of the business, the effective management of risk and the values to be adopted by the Corporation; and
- (c) ensure that appropriate and effective environmental and occupational health and safety policies are in place, are operational and are supported by adequate resources.

5. The Board will:

- (a) ensure the integrity of the Corporation's financial reporting and internal control and disclosure policies and processes;
- (b) review the Corporation's quarterly and year-end audited financial statements;
- (c) review annual audit plans and findings and monitor the implementation of audit recommendations;
- (d) ensure that the Board has available to it any independent external advice that may be required from time to time; and
- (e) implement, or delegate the implementation of measures for receiving feedback from stakeholders.

Risk Management and Ethics

6. The Board will:

- (a) ensure that the business of the Corporation is conducted in compliance with applicable laws and regulations and according to the highest ethical standards;
- (b) identify and document the financial risks and other risks that the Corporation faces in the course of its business and ensure that such risks are appropriately managed; and
- (c) adopt a disclosure policy.

Shareholder Communication

7. The Board will ensure that effective communication and disclosure policies are in place between the Board and the Corporation's shareholders, other stakeholders and the public. The Board will determine, from time to time, the appropriate criteria against which to evaluate performance against shareholder expectations and will set corporate strategic goals and objectives within this context. The Board will regularly review its criteria for the evaluation of shareholder expectations to ensure that they remain relevant to changing circumstances.

Supervision of Management

8. The Board will:
 - (a) to the extent feasible, satisfy itself as to the integrity of the CEO and other executive officers and that all such officers are creating a culture of integrity throughout the Corporation;
 - (b) ensure that the CEO is appropriately managing the business of the Corporation;
 - (c) ensure appropriate succession planning is in place (including appointing, training and monitoring senior management), in particular with respect to the CEO position;
 - (d) establish corporate objectives for the CEO annually and evaluate the performance of the CEO against these corporate objectives;
 - (e) consider and approve major business initiatives and corporate transactions proposed by management; and
 - (f) ensure the Corporation has internal control and management information systems in place.

Management of Board Affairs

9. The Board will:
 - (a) ensure that an appropriate governance structure is in place, including a proper delineation of roles and clear authority and accountability among the Board, Board committees, the CEO and the Chief Financial Officer (or its functional equivalent);
 - (b) develop a process for the orientation and education of new members of the Board;
 - (c) support continuing education opportunities for all members of the Board;
 - (d) in conjunction with the Corporate Governance and Nominating Committee, assess the participation, contributions and effectiveness of the Chair of the Board, and individual Board members on an annual basis;
 - (e) monitor the effectiveness of the Board and its committees and the actions of the Board as viewed by the individual directors and senior management;
 - (f) ensure that Board meetings operate effectively, agendas are focused on the governance role of the Board, and that the Board is able to function independently of management when required;

- (g) ensure that effective governance policies are in place regarding the conduct of individual directors and employees, including but not limited to, policies relating to insider trading and confidentiality and conflict of interest;
- (h) establish the committees of the Board it deems necessary or as required by applicable law to assist it in the fulfillment of its mandate; and
- (i) disclose on an annual basis the mandate, composition of the Board and its committees.

APPENDIX B

APTOSE BIOSCIENCES INC. 2021 STOCK INCENTIVE PLAN

Section 1. Purpose

The purpose of the Plan is to promote the interests of the Company and its shareholders by aiding the Company in attracting and retaining employees, officers, consultants, advisors, independent contractors and non-employee Directors capable of assuring the future success of the Company, to offer such persons incentives to put forth maximum efforts for the success of the Company's business and to compensate such persons through stock-based awards and provide them with opportunities for stock ownership in the Company, thereby aligning the interests of such persons with the Company's shareholders.

Section 2. Definitions

As used in the Plan, the following terms shall have the meanings set forth below:

- (a) "*Affiliate*" shall mean any entity that, directly or indirectly through one or more intermediaries, is controlled by the Company.
- (b) "*Award*" shall mean any Option, Stock Appreciation Right, Restricted Stock, Restricted Stock Unit or Dividend Equivalent granted under the Plan.
- (c) "*Award Agreement*" shall mean any written agreement, contract or other instrument or document evidencing an Award granted under the Plan (including a document in an electronic medium) executed in accordance with the requirements of Section 9(b).
- (d) "*Board*" shall mean the Board of Directors of the Company.
- (e) "*Code*" shall mean the Internal Revenue Code of 1986, as amended from time to time, and any regulations promulgated thereunder.
- (f) "*Committee*" means a committee or subcommittee of the Board appointed from time to time by the Board. Notwithstanding the foregoing, if, and to the extent that no Committee exists which has the authority to administer this Plan, the functions of the Committee shall be exercised by the Board and all references herein to the Committee shall be deemed to be references to the Board. The Committee shall be comprised of not less than such number of Directors as shall be required to permit Awards granted under the Plan to qualify under Rule 16b-3, and each member of the Committee shall be a "non-employee director" within the meaning of Rule 16b-3.
- (g) "*Common Share*" or "*Common Shares*" shall mean common shares of the Company (or such other securities or property as may become subject to Awards pursuant to an adjustment made under Section 4(c) of the Plan), provided that such class is listed on a securities exchange.

(h) “*Company*” shall mean Aptose Biosciences Inc., a corporation incorporated under the laws of Canada and any successor corporation.

(i) “*Director*” shall mean a member of the Board.

(j) “*Dividend Equivalent*” shall mean any right granted under Section 6(b) of the Plan.

(k) “*Eligible Person*” shall mean any employee, officer, non-employee Director, consultant, independent contractor or advisor providing services to the Company or any Affiliate, or any such person to whom an offer of employment or engagement with the Company or any Affiliate is extended. An Eligible Person must be a natural person.

(l) “*Exchange Act*” shall mean the Securities Exchange Act of 1934, as amended.

(m) “*Fair Market Value*” shall mean the closing price of the Common Shares, as reported on the NASDAQ Stock Market or Toronto Stock Exchange, whichever exchange is designated in the Award Agreement, and any successor securities exchange thereof, or, if the applicable securities exchange is not open for trading on such date, on the most recent preceding date when such exchange is open for trading. In all other cases, Fair Market Value shall mean the amount which is determined by the Committee, in good faith, to be the fair market value of one Common Share.

(n) “*Incentive Stock Option*” shall mean an option granted under Section 6(a) of the Plan that is intended to meet the requirements of Section 422 of the Code or any successor provision.

(o) “*Non-Qualified Stock Option*” shall mean an option granted under Section 6(a) of the Plan that is not intended to be an Incentive Stock Option.

(p) “*Option*” shall mean an Incentive Stock Option or a Non-Qualified Stock Option to purchase Common Shares of the Company.

(q) “*Participant*” shall mean an Eligible Person designated to be granted an Award under the Plan.

(r) “*Plan*” shall mean the Aptose Biosciences Inc. 2021 Stock Incentive Plan, as amended from time to time.

(s) “*Prior Stock Plans*” shall mean the Aptose Biosciences Inc. 2015 Stock Incentive Plan and the Aptose Biosciences Inc. Share Option Plan, as amended from time to time.

(t) “*Restricted Stock*” shall mean any Common Share granted under Section 6(c) of the Plan.

(u) “*Restricted Stock Unit*” shall mean any unit granted under Section 6(c) of the Plan evidencing the right to receive a Common Share (or a cash payment equal to the Fair Market Value of a Common Share) at some future date.

(v) “*Rule 16b-3*” shall mean Rule 16b-3 promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended, or any successor rule or regulation.

(w) “*Section 409A*” shall mean Section 409A of the Code, or any successor provision, and applicable Treasury Regulations and other applicable guidance thereunder.

(x) “*Securities Act*” shall mean the Securities Act of 1933, as amended.

(y) “*Specified Employee*” shall mean a specified employee as defined in Section 409A(a)(2)(B) of the Code or applicable proposed or final regulations under Section 409A, determined in accordance with procedures established by the Company and applied uniformly with respect to all plans maintained by the Company that are subject to Section 409A.

(z) “*TSX Rules*” means the rules of the Toronto Stock Exchange Company Manual relating to changes in the capital structure of listed companies in connection with security based compensation arrangements (currently Section 613), as those rules may be amended, renumbered or reclassified from time to time, or any successors.

(aa) “*Stock Appreciation Right*” shall mean any right granted under Section 6(b) of the Plan.

Section 3. Administration

(a) Power and Authority of the Committee. The Plan shall be administered by the Committee. Subject to the express provisions of the Plan and to applicable law, the Committee shall have full power and authority to: (i) designate Participants and grant Awards; (ii) determine the type or types of Awards to be granted to each Participant under the Plan; (iii) determine the number of Common Shares to be covered by (or the method by which payments or other rights are to be calculated in connection with) each Award; (iv) determine the terms and conditions of any Award or Award Agreement, including any terms relating to the forfeiture of any Award and the forfeiture, recapture or disgorgement of any cash, Common Shares or other amounts payable with respect to any Award; (v) amend the terms and conditions of any Award or Award Agreement, subject to the limitations under Sections 6 and 7; (vi) accelerate the exercisability of any Award or the lapse of any restrictions relating to any Award, subject to the limitations of Sections 6 and 7; (vii) determine whether, to what extent and under what circumstances Awards may be exercised in cash, Common Shares, other securities, other Awards or other property (but excluding promissory notes), or canceled, forfeited or suspended; (viii) determine whether, to what extent and under what circumstances amounts payable with respect to an Award under the Plan shall be deferred either automatically or at the election of the holder thereof or the Committee, subject to the requirements of Section 409A; (ix) interpret and administer the Plan and any instrument or agreement, including an Award Agreement, relating to the Plan; (x) establish, amend, suspend or waive such rules and regulations and appoint such agents as it shall deem appropriate for the proper administration of the Plan; (xi) make any other determination and take any other action that the Committee deems necessary or desirable for the administration of the Plan; and (xii) adopt such modifications, rules, procedures and sub-plans as may be necessary or desirable to comply with provisions of

the laws of non-U.S. or Canadian jurisdictions in which the Company or an Affiliate may operate, including, without limitation, establishing any special rules for Affiliates, Eligible Persons or Participants located in any particular country, in order to meet the objectives of the Plan and to ensure the viability of the intended benefits of Awards granted to Participants located in such non-United States jurisdictions. Any sub-plan established hereunder shall be deemed a part of the Plan, except to the extent of any inconsistency between the terms of the Plan and the terms of such sub-plan, in which event the terms of such sub-plan shall prevail. Each sub-plan shall apply only to the Eligible Persons in the jurisdiction for which the sub-plan was designed. Unless otherwise expressly provided in the Plan, all designations, determinations, interpretations and other decisions under or with respect to the Plan or any Award or Award Agreement shall be within the sole discretion of the Committee, may be made at any time and shall be final, conclusive and binding upon any Participant, any holder or beneficiary of any Award or Award Agreement, and any employee of the Company or any Affiliate.

(b) Delegation. The Committee may delegate to one or more officers or Directors of the Company, subject to such terms, conditions and limitations as the Committee may establish in its sole discretion, the authority to grant Awards; provided, however, that the Committee shall not delegate such authority (i) with regard to grants of Awards to be made to officers or directors of the Company or (ii) in such a manner as would contravene applicable law or applicable exchange rules.

(c) Power and Authority of the Board. Notwithstanding anything to the contrary contained herein, the Board may, at any time and from time to time, without any further action of the Committee, exercise all the powers and duties of the Committee under the Plan, unless the exercise of such powers and duties by the Board would cause the Plan not to comply with the requirements of Rule 16b-3; and only the Committee (or another committee of the Board comprised of directors who qualify as independent directors within the meaning of the independence rules of any applicable securities exchange where the Common Shares are then listed) may grant Awards to Directors who are not also employees of the Company or an Affiliate.

(d) Indemnification. To the full extent permitted by law, (i) no member of the Board, the Committee or any person to whom the Committee delegates authority under the Plan shall be liable for any action or determination taken or made in good faith with respect to the Plan or any Award made under the Plan, and (ii) the members of the Board, the Committee and each person to whom the Committee delegates authority under the Plan shall be entitled to indemnification and reimbursement by the Company with regard to such actions and determinations in accordance with applicable law in the manner provided in the Company's by-laws and any indemnification agreements as they may be amended from time to time. The provisions of this paragraph shall be in addition to such other rights of indemnification as a member of the Board, the Committee or any other person may have by virtue of such person's position with the Company.

Section 4. Common Shares Available for Awards

(a) Common Shares Available. Subject to adjustment as provided in Section 4(c) of the Plan, the aggregate number of Common Shares that may be issued under all Awards under the Plan shall equal:

- (i) 6,343,242 Common Shares of which all of the Common Shares may be granted as Incentive Stock Options, plus
- (ii) any Common Shares subject to any outstanding award under the Prior Stock Plans that, on and after the date shareholders approve the Plan, are not purchased or are forfeited, paid in cash or reacquired by the Company (subject to the limitations in Section 4(b) below), or otherwise not delivered to the Participant due to termination or cancellation of such award.

On and after stockholder approval of this Plan, no awards shall be granted under the Prior Stock Plans, but all outstanding awards previously granted under the Prior Stock Plans shall remain outstanding and subject to the terms of the Prior Stock Plans.

When determining the Common Shares added to and subtracted from the aggregate reserve, the number of Common Shares added or subtracted shall be also determined in accordance with the Common Share counting rules described in Section 4(b) below.

(b) Counting Common Shares. Except as set forth in this Section 4(b) below, if an Award entitles the holder thereof to receive or purchase Common Shares, the number of Common Shares covered by such Award or to which such Award relates shall be counted on the date of grant of such Award against the aggregate number of Common Shares available for granting Awards under the Plan.

- (i) Common Shares Added Back to Reserve. Subject to the limitations in (ii) below, if any Common Shares covered by an Award or to which an Award relates are not purchased or are forfeited or are reacquired by the Company, or if an Award otherwise terminates or is cancelled without delivery of any Common Shares, then the number of Common Shares counted against the aggregate number of Common Shares available under the Plan with respect to such Award, to the extent of any such forfeiture, reacquisition by the Company, termination or cancellation, shall again be available for granting Awards under the Plan.
- (ii) Common Shares Not Added Back to Reserve. Notwithstanding anything to the contrary in (i) above, the following Common Shares will not again become available for issuance under the Plan: (A) any Common Shares which would have been issued upon any exercise of an Option but for the fact that the exercise price was paid by a “net exercise” or any Common Shares tendered in payment of the exercise price of an Option; (B) any Common Shares withheld by the Company or Common Shares tendered to

satisfy any tax withholding obligation with respect to an Award; (C) Common Shares covered by a stock-settled Stock Appreciation Right issued under the Plan that are not issued in connection with settlement in Common Shares upon exercise; or (D) Common Shares that are repurchased by the Company using Option exercise proceeds.

- (iii) Cash-Only Awards. Awards that do not entitle the holder thereof to receive or purchase Common Shares shall not be counted against the aggregate number of Common Shares available for Awards under the Plan.
- (iv) Substitute Awards Relating to Acquired Entities. Common Shares issued under Awards granted in substitution for awards previously granted by an entity that is acquired by or merged with the Company or an Affiliate shall not be counted against the aggregate number of Common Shares available for Awards under the Plan.

(c) Adjustments. In the event that any dividend (other than a regular cash dividend) or other distribution (whether in the form of cash, Common Shares, other securities or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of Common Shares or other securities of the Company, issuance of warrants or other rights to purchase Common Shares or other securities of the Company or other similar corporate transaction or event affects the Common Shares such that an adjustment is necessary in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, then the Committee shall, in accordance with applicable law and in such manner as it may deem equitable, adjust any or all of (i) the number and type of Common Shares (or other securities or other property) that thereafter may be made the subject of Awards, and (ii) the number and type of Common Shares (or other securities or other property) subject to outstanding Awards.

(d) Individual Limitations Under the Plan. The limitation contained in this Section 4(d) shall apply only with respect to any Award or Awards granted under this Plan, and limitations on awards granted under any other shareholder-approved incentive plan maintained by the Company will be governed solely by the terms of such other plan.

- (i) Annual Limit on Awards Granted to Non-Employee Directors. Notwithstanding any provision to the contrary in the Plan, the sum of the grant date fair value of equity-based Awards (such value computed as of the date of grant in accordance with applicable financial accounting rules) and the amount of any cash-based compensation granted to a non-employee Director during any calendar year shall not exceed \$500,000. The independent members of the Board may make exceptions to this limit for a non-executive chair of the Board, provided that the non-employee Director receiving such additional compensation may not participate in the decision to award such compensation.

Section 5. Eligibility

Any Eligible Person shall be eligible to be designated as a Participant. In determining which Eligible Persons shall receive an Award and the terms of any Award, the Committee may take into account the nature of the services rendered by the respective Eligible Persons, their present and potential contributions to the success of the Company or such other factors as the Committee, in its discretion, shall deem relevant. Notwithstanding the foregoing, an Incentive Stock Option may only be granted to full-time or part-time employees (which term as used herein includes, without limitation, officers and Directors who are also employees) who are subject to taxation in the United States, and an Incentive Stock Option shall not be granted to an employee of an Affiliate unless such Affiliate is also a “subsidiary corporation” of the Company within the meaning of Section 424(f) of the Code or any successor provision.

Section 6. Awards

(a) Options. The Committee is hereby authorized to grant Options to Eligible Persons with the following terms and conditions and with such additional terms and conditions not inconsistent with the provisions of the Plan as the Committee shall determine:

- (i) Exercise Price. The purchase price per Common Share purchasable under an Option shall be determined by the Committee and shall not be less than one hundred percent (100%) of the Fair Market Value of a Common Share on the date of grant of such Option; *provided, however*, that the Committee may, subject to applicable law, designate a purchase price below Fair Market Value on the date of grant if the Option is granted in substitution for a stock option previously granted by an entity that is acquired by or merged with the Company or an Affiliate.
- (ii) Option Term. The term of each Option shall be fixed by the Committee at the date of grant but shall not be longer than 10 years from the date of grant.
- (iii) Time and Method of Exercise. The Committee shall determine the time or times at which an Option may be exercised within the Option term (subject to the exercise provisions in Section 6), either in whole or in part, and the method of exercise, except that any exercise price tendered shall be in either cash, wire transfer of immediately available funds, Common Shares having a Fair Market Value on the exercise date equal to the applicable exercise price or a combination thereof, as determined by the Committee and as provided in an Award Agreement.
 - (A) Promissory Notes. For avoidance of doubt, the Committee may not accept a promissory note as consideration.
 - (B) Net Exercises. The terms of any Option may be written to permit,
 - (i) delivery of a written or electronic notice that the Participant has placed a market sell order with a broker acceptable to the Company with respect to Common Shares then issuable upon

exercise of the Option, and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of the aggregate exercise price; provided that payment of such proceeds is then made to the Company upon settlement of such sale, or (ii) except in the case of Options issued to Participants subject to taxation in Canada, the Option to be exercised by delivering to the Participant a number of Common Shares having an aggregate Fair Market Value (determined as of the date of exercise) equal to the excess, if any, of the Fair Market Value of the Common Shares underlying the Option being exercised, on the date of exercise, over the exercise price of the Option for such Common Shares.

- (iv) Incentive Stock Options. Notwithstanding anything in the Plan to the contrary, the following additional provisions shall apply to the grant of stock options which are intended to qualify as Incentive Stock Options to Eligible Participants who are subject to taxation in the United States:
- (A) Each Option will be designated, in writing, as an Incentive Stock Option or Non-Qualified Stock Option at the time of grant; provided, however, that if an Option is not so designated or if an Option designated as an Incentive Stock Option fails to qualify as an Incentive Stock Option, then such Option will be a Non-Qualified Stock Option, and the Common Shares purchased upon exercise of each type of Option will be separately accounted for.
 - (B) To the extent that the aggregate Fair Market Value (determined at the time of grant) of the Common Shares with respect to which Incentive Stock Options are exercisable for the first time by any Participant during any calendar year (under all plans of the Company and any Affiliates) exceeds \$100,000 (or such other limit established in the Code) or otherwise does not comply with the rules governing Incentive Stock Options, the Options or portions thereof that exceed such limit (according to the order in which they were granted) or otherwise do not comply with such rules will be treated as Non-Qualified Stock Options, notwithstanding any contrary provision of the applicable Award Agreement(s).
 - (C) All Incentive Stock Options must be granted within ten years from the date on which this Plan was approved by the shareholders of the Company.
 - (D) Unless sooner exercised, all Incentive Stock Options shall expire and no longer be exercisable no later than ten (10) years after the date of grant; *provided, however*, that in the case of a grant of an Incentive Stock Option to a Participant who, at the time such Option is granted, owns (within the meaning of Section 422 of the

Code) stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of its Affiliates, such Incentive Stock Option shall expire and no longer be exercisable no later than five (5) years from the date of grant.

- (E) The purchase price per Common Share for an Incentive Stock Option shall be not less than one hundred percent (100%) of the Fair Market Value of a Common Share on the date of grant of the Incentive Stock Option; *provided, however*, that, in the case of the grant of an Incentive Stock Option to a Participant who, at the time such Option is granted, owns (within the meaning of Section 422 of the Code) stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of its Affiliates, the purchase price per Common Share purchasable under an Incentive Stock Option shall be not less than one hundred ten percent (110%) of the Fair Market Value of a Common Share on the date of grant of the Incentive Stock Option.
- (F) Any Incentive Stock Option authorized under the Plan shall contain such other provisions as the Committee shall deem advisable, but shall in all events be consistent with and contain all provisions required in order to qualify the Option as an Incentive Stock Option.

(b) Stock Appreciation Rights. The Committee is hereby authorized to grant Stock Appreciation Rights to Eligible Persons subject to the terms of the Plan and any applicable Award Agreement. A Stock Appreciation Right granted under the Plan shall confer on the holder thereof a right to receive upon exercise thereof the excess of (i) the Fair Market Value of one Common Share on the date of exercise over (ii) the grant price of the Stock Appreciation Right as specified by the Committee, which price shall not be less than one hundred percent (100%) of the Fair Market Value of one Common Share on the date of grant of the Stock Appreciation Right; *provided, however*, that subject to applicable law, the Committee may designate a grant price below Fair Market Value on the date of grant if the Stock Appreciation Right is granted in substitution for a stock appreciation right previously granted by an entity that is acquired by or merged with the Company or an Affiliate. Subject to the terms of the Plan and any applicable Award Agreement, the grant price, term, methods of exercise, dates of exercise, methods of settlement and any other terms and conditions of any Stock Appreciation Right shall be as determined by the Committee (except that the term of each Stock Appreciation Right shall be subject to the term limitation in Section 6(a)(ii) applicable to Options). The Committee may impose such conditions or restrictions on the exercise of any Stock Appreciation Right as it may deem appropriate. Restricted Stock and Restricted Stock Units. The Committee is hereby authorized to grant an Award of Restricted Stock and Restricted Stock Units to Eligible Persons with the following terms and conditions and with such additional terms and conditions not inconsistent with the provisions of the Plan as the Committee shall determine:

- (i) Restrictions. Common Shares of Restricted Stock and Restricted Stock Units shall be subject to such restrictions as the Committee may impose (including, without limitation, any limitation on the right to vote a Common Share of Restricted Stock or the right to receive any dividend or other right or property with respect thereto), which restrictions may lapse separately or in combination at such time or times, in such installments or otherwise as the Committee may deem appropriate. For purposes of clarity and without limiting the Committee's general authority under Section 3(a), vesting of such Awards may, at the Committee's discretion, be conditioned upon the Participant's completion of a specified period of service with the Company or an Affiliate, or upon the achievement of one or more performance goals established by the Committee, or upon any combination of service-based and performance-based conditions (subject to the minimum requirements in Section 6). Notwithstanding the foregoing, rights to dividend or Dividend Equivalent payments shall be subject to the limitations described in Section 6(d).

- (ii) Issuance and Delivery of Common Shares. Any Restricted Stock granted under the Plan shall be issued at the time such Awards are granted and may be evidenced in such manner as the Committee may deem appropriate, including book-entry registration or issuance of a stock certificate or certificates, which certificate or certificates shall be held by the Company or held in nominee name by the stock transfer agent or brokerage service selected by the Company to provide such services for the Plan. Common Shares representing Restricted Stock that are no longer subject to restrictions shall be delivered (including by updating the book-entry registration) to the Participant promptly after the applicable restrictions lapse or are waived. In the case of Restricted Stock Units, no Common Share shall be issued at the time such Awards are granted. Upon the lapse or waiver of restrictions and the restricted period relating to Restricted Stock Units evidencing the right to receive Common Shares, such Common Shares shall be issued and delivered to the holder of the Restricted Stock Units.

(d) Dividend Equivalents. The Committee is hereby authorized to grant Dividend Equivalents to Eligible Persons under which the Participant shall be entitled to receive payments (net of any applicable withholding tax and on terms and subject to conditions established and determined by and in the discretion of the Committee) equivalent to and in lieu of the amount of cash dividends paid by the Company to holders of Common Shares with respect to a number of Common Shares determined by the Committee. Subject to the terms of the Plan and any applicable Award Agreement, such Dividend Equivalents may have such terms and conditions as the Committee shall determine. Notwithstanding the foregoing, (i) the Committee may not grant Dividend Equivalents to Eligible Persons in connection with grants of Options and Stock Appreciation Rights and (ii) dividend and Dividend Equivalent amounts with respect to any Common Share underlying Restricted Stock or Restricted Stock Unit Award may be accrued but not paid to a Participant until all conditions or restrictions relating to such Common Share have been satisfied, waived or lapsed.

- (e) General.
- (i) Consideration for Awards. Awards may be granted for no cash consideration or for any cash or other consideration as may be determined by the Committee or required by applicable law.
- (ii) Awards May Be Granted Separately or Together. Awards may, in the discretion of the Committee, be granted either alone or in addition to, in tandem with or in substitution for any other Award or any award granted under any other plan of the Company or any Affiliate. Awards granted in addition to or in tandem with other Awards or in addition to or in tandem with awards granted under any other plan of the Company or any Affiliate may be granted either at the same time as or at a different time from the grant of such other Awards or awards.
- (iii) Limits on Transfer of Awards. No Award (other than fully vested and unrestricted Common Shares issued pursuant to any Award) and no right under any such Award shall be transferable by a Participant other than by will or by the laws of descent and distribution, and no Award (other than fully vested and unrestricted Common Shares issued pursuant to any Award) or right under any such Award may be pledged, alienated, attached or otherwise encumbered, and any purported pledge, alienation, attachment or encumbrance thereof shall be void and unenforceable against the Company or any Affiliate. Notwithstanding the foregoing, subject to applicable laws, the Committee may permit the transfer of an Award to family members if such transfer is for no value and in accordance with the rules of Form S-8. Subject to applicable law, the Committee may also establish procedures as it deems appropriate for a Participant to designate a person or persons, as beneficiary or beneficiaries, to exercise the rights of the Participant and receive any property distributable with respect to any Award in the event of the Participant's death.
- (iv) Restrictions; Securities Exchange Listing. All Common Shares or other securities delivered under the Plan pursuant to any Award shall be subject to such restrictions as the Committee may deem advisable under the Plan, applicable federal, provincial or state securities laws and regulatory requirements, and the Committee may cause appropriate entries to be made with respect to, or legends to be placed on the certificates for, such Common Shares or other securities to reflect such restrictions. The Company shall not be required to deliver any Common Shares or other securities covered by an Award unless and until the requirements of any federal, provincial or state securities or other laws, rules or regulations (including the rules of any securities exchange) as may be determined by the Company to be applicable are satisfied.

- (v) Section 409A Provisions. Notwithstanding anything in the Plan or any Award Agreement to the contrary, to the extent that any amount or benefit that constitutes “deferred compensation” to a Participant under Section 409A and applicable guidance thereunder is otherwise payable or distributable to a Participant under the Plan or any Award Agreement solely by reason of the occurrence of a change in control or due to the Participant’s disability or “separation from service” (as such term is defined under Section 409A), such amount or benefit will not be payable or distributable to the Participant by reason of such circumstance unless the Committee determines in good faith that (i) the circumstances giving rise to such change in control event, disability or separation from service meet the definition of a change in control event, disability, or separation from service, as the case may be, in Section 409A(a)(2)(A) of the Code and applicable proposed or final regulations, or (ii) the payment or distribution of such amount or benefit would be exempt from the application of Section 409A by reason of the short-term deferral exemption or otherwise. Any payment or distribution that otherwise would be made to a Participant who is a Specified Employee (as determined by the Committee in good faith) on account of separation from service may not be made before the date which is six months after the date of the Specified Employee’s separation from service (or if earlier, upon the Specified Employee’s death) unless the payment or distribution is exempt from the application of Section 409A by reason of the short-term deferral exemption or otherwise.
- (vi) Prohibition on Option and Stock Appreciation Right Repricing. Except as provided in Section 4(c) hereof, the Committee may not, without prior approval of the Company’s shareholders, seek to effect any re-pricing of any previously granted, “underwater” Option or Stock Appreciation Right by: (i) amending or modifying the terms of the Option or Stock Appreciation Right to lower the exercise price; (ii) canceling the underwater Option or Stock Appreciation Right and granting either (A) replacement Options or Stock Appreciation Rights having a lower exercise price; or (B) Restricted Stock, Restricted Stock Units or Other Stock-Based Award in exchange; or (iii) cancelling or repurchasing the underwater Option or Stock Appreciation Right for cash or other securities. An Option or Stock Appreciation Right will be deemed to be “underwater” at any time when the Fair Market Value of the Common Shares covered by such Option or Stock Appreciation Right is less than the exercise price.
- (vii) Limits on Acceleration or Waiver of Restrictions Upon Change in Control. No Award Agreement shall contain a definition of change in control that has the effect of accelerating the exercisability of any Award or the lapse of restrictions relating to any Award upon only the announcement or shareholder approval of (rather than consummation of) any reorganization,

merger or consolidation of, or sale or other disposition of all or substantially all of the assets of, the Company.

Section 7. Amendment and Termination; Corrections

(a) Amendments to the Plan and Awards. The Board may from time to time amend, suspend or terminate this Plan or any Award Agreement, and the Committee may amend the terms of any previously granted Award, provided that no amendment to the terms of any previously granted Award may, (except as expressly provided in the Plan) materially and adversely alter or impair the terms or conditions of the Award previously granted to a Participant under this Plan without the written consent of the Participant or holder thereof. Any amendment to this Plan, an Award Agreement or to the terms of any Award previously granted, is subject to compliance with all applicable laws, rules, regulations and policies of any applicable governmental entity or securities exchange, including receipt of any required approval from the governmental entity or stock exchange. For greater certainty and without limiting the foregoing, the Board may amend, suspend, terminate or discontinue the Plan or any Award Agreement, and the Committee may amend or alter any previously granted Award, as applicable, without obtaining the approval of shareholders of the Company in order to:

- (i) correct any defect, supply any omission or reconcile any inconsistency in the Plan or in any Award or Award Agreement in the manner and to the extent it shall deem desirable to implement or maintain the effectiveness of the Plan;
- (ii) amend the eligibility for, and limitations or conditions imposed upon, participation in the Plan;
- (iii) make changes that are necessary or desirable to comply with applicable laws, rules, regulations and policies of any applicable governmental entity or stock exchange (including amendments to Awards necessary or desirable to maximize any available tax deduction or to avoid any adverse tax results, and no action taken to comply with such laws, rules, regulations and policies shall be deemed to impair or otherwise adversely alter or impair the rights of any holder of an Award or beneficiary thereof);
- (iv) amend any terms relating to the administration of the Plan, including the terms of any administrative guidelines or other rules related to the Plan; or
- (v) make any other amendment, whether fundamental or otherwise, not requiring shareholders' approval under TSX Rules, the rules or regulations of the Securities and Exchange Commission or any other securities exchange that are applicable to the Company.

For greater certainty, prior approval of the shareholders of the Company shall be required for any amendment to the Plan or an Award that would:

- (I) require shareholder approval under TSX Rules, the rules or regulations of the Securities and Exchange Commission or any other securities exchange that are applicable to the Company;
- (II) increase the number of shares authorized under the Plan as specified in Section 4(a) of the Plan;
- (III) permit repricing of Options or Stock Appreciation Rights, which is currently prohibited by Section 6 of the Plan;
- (IV) permit the award of Options or Stock Appreciation Rights at a price less than one-hundred percent (100%) of the Fair Market Value of a Common Share on the date of grant of such Option or Stock Appreciation Right, contrary to the provisions of Section 6(a)(i) and Section 6(b) of the Plan;
- (V) increase the maximum term permitted for Options and Stock Appreciation Rights as specified in Section 6(a) and Section 6(b); or
- (VI) increase the number of shares or dollar value subject to the annual limitations contained in Section 4(d) of the Plan.

(b) Corporate Transactions. In the event of any reorganization, merger, consolidation, split-up, spin-off, combination, plan of arrangement, take-over bid or tender offer, repurchase or exchange of Common Shares or other securities of the Company or any other similar corporate transaction or event involving the Company, the Committee or the Board may, in its sole discretion, provide for any of the following at the election of the applicable Participant but subject to the approval of the Board or the Committee, as the case may be, to be effective upon the consummation of the event (or effective immediately prior to the consummation of the event, provided that the consummation of the event subsequently occurs), and no action taken under this Section 7(b) shall be deemed to impair or otherwise adversely alter or impair the rights of any holder of an Award or beneficiary thereof:

- (i) either (A) termination of any Award, whether or not vested, in exchange for an amount of cash and/or other property, if any, equal to the amount that would have been attained upon the exercise of the vested portion of the Award or realization of the Participant's vested rights (and, for the avoidance of doubt, if, as of the date of the occurrence of the transaction or event described in this Section 7(b)(i)(A), the Committee or the Board determines in good faith that no amount would have been attained upon the exercise of the Award or realization of the Participant's rights, then the Award may be terminated by the Company without any payment) or (B) the replacement of the Award with other rights or property selected by the Committee or the Board, in its sole discretion;
- (ii) that the Award be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by similar options, rights or awards covering the stock of the successor or survivor

corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices;

- (iii) that the Award shall be exercisable or payable or fully vested with respect to all Common Shares covered thereby, notwithstanding anything to the contrary in the applicable Award Agreement; or
- (iv) that the Award cannot vest, be exercised or become payable after a date certain in the future, which may be the effective date of the event.

Section 8. Income Tax Withholding and Tax Treatment

(a) Income Tax Withholding. In order to comply with all applicable federal, state, provincial, local or foreign income tax laws or regulations, the Company may take such action as it deems appropriate to ensure that all applicable federal, state, provincial, local or foreign payroll, withholding, income or other amounts and taxes, which are the sole and absolute responsibility of a Participant, are withheld or collected from such Participant. Without limiting the foregoing, for avoidance of doubt, the Committee, in its discretion and subject to such additional terms and conditions as it may adopt, may permit the Participant to satisfy such tax obligation by (a) electing to have the Company withhold a portion of the Common Shares otherwise to be delivered upon exercise or receipt of (or the lapse of restrictions relating to) such Award with a Fair Market Value equal to the amount of such taxes (subject to any limitations required by ASC Topic 718 to avoid adverse accounting treatment) and by the Company selling, or causing a broker to sell, on behalf of the Participant such Common Shares in the open market and use the proceeds from such sale to satisfy the amount of such taxes; (b) delivering to the Company Common Shares other than Common Shares issuable upon exercise or receipt of (or the lapse of restrictions relating to) such Award with a Fair Market Value equal to the amount of such taxes or (c) by any other means set forth in the applicable Award Agreement. For greater certainty, it is the responsibility of the Participant to complete and file any tax returns that may be required under applicable laws within the periods specified in those laws as a result of the Participant's participation in the Plan or any Award. Notwithstanding any other provision of this Plan, a Participant shall be solely responsible for all tax withholding obligations arising as a result of the Participant's participation in the Plan or any Award.

(b) No Guarantees Regarding Tax Treatment. Participants (and their beneficiaries) shall be responsible for all taxes with respect to any Award under the Plan. The Company, the Board and the Committee make no guarantees to any Person regarding the tax treatment in respect of the Awards or payments made under the Plan.

(c) Other Tax Matters. Each Option granted to a Participant who is a Canadian taxpayer will be construed and administered such that, in the reasonable good-faith determination of the Committee, the Participant qualifies for a deduction under paragraph 110(1)(d) of the Income Tax Act (Canada). Notwithstanding the foregoing, in no event will the Company, the Board or the Committee have any liability.

Section 9. General Provisions

(a) No Rights to Awards. No Eligible Person, Participant or other person shall have any claim to be granted any Award under the Plan, and there is no obligation for uniformity of treatment of Eligible Persons, Participants or holders or beneficiaries of Awards under the Plan. The terms and conditions of Awards need not be the same with respect to any Participant or with respect to different Participants.

(b) Award Agreements. No Participant shall have rights under an Award granted to such Participant unless and until an Award Agreement shall have been signed by the Participant (if requested by the Company), or until such Award Agreement is delivered and accepted through an electronic medium in accordance with procedures established by the Company. An Award Agreement need not be signed by a representative of the Company unless required by the Committee. Each Award Agreement shall be subject to the applicable terms and conditions of the Plan and any other terms and conditions (not inconsistent with the Plan) determined by the Committee. The Committee, in its sole discretion, may include such further provisions and limitations in any Award Agreement, as it may deem equitable and in the best interests of the Company that are not inconsistent with the provisions of the Plan.

(c) Plan Provisions Control. In the event that any provision of an Award Agreement conflicts with or is inconsistent in any respect with the terms of the Plan as set forth herein or subsequently amended, the terms of the Plan shall control.

(d) No Rights of Shareholders. Except with respect to Common Shares issued under Awards (and subject to such conditions as the Committee may impose on such Awards), neither a Participant nor the Participant's legal representative shall be, or have any of the rights and privileges of, a shareholder of the Company with respect to any Common Shares issuable upon the exercise or payment of any Award, in whole or in part, unless and until such Common Shares have been issued.

(e) No Limit on Other Compensation Arrangements. Nothing contained in the Plan shall prevent the Company or any Affiliate from adopting or continuing in effect other or additional compensation plans or arrangements, and such plans or arrangements may be either generally applicable or applicable only in specific cases.

(f) No Right to Employment or Directorship. The grant of an Award shall not be construed as giving a Participant the right to be retained as an employee of the Company or any Affiliate, or the right to be retained as a Director, nor will it affect in any way the right of the Company or an Affiliate to terminate a Participant's employment at any time, with or without cause, or remove a Director in accordance with applicable law. In addition, the Company or an Affiliate may at any time dismiss a Participant from employment, or remove a Director who is a Participant, free from any liability or any claim under the Plan or any Award, unless otherwise expressly provided in the Plan or in any Award Agreement. Nothing in this Plan shall confer on any person any legal or equitable right against the Company or any Affiliate, directly or indirectly, or give rise to any cause of action at law or in equity against the Company or an Affiliate. Under no circumstances shall any person ceasing to be an employee or Director of the Company or any Affiliate be entitled to any compensation for any loss of any right or benefit

under the Plan which such employee or Director might otherwise have enjoyed but for termination of employment or directorship, whether such compensation is claimed by way of damages for wrongful or unfair dismissal, breach of contract or otherwise. By participating in the Plan, each Participant shall be deemed to have accepted all the conditions of the Plan and the terms and conditions of any rules and regulations adopted by the Committee and shall be fully bound thereby.

(g) Governing Law. The internal law, and not the law of conflicts, of the Province of Ontario shall govern all questions concerning the validity, construction and effect of the Plan or any Award, and any rules and regulations relating to the Plan or any Award.

(h) Severability. If any provision of the Plan or any Award is or becomes or is deemed to be invalid, illegal or unenforceable in any jurisdiction or would disqualify the Plan or any Award under any law deemed applicable by the Committee, such provision shall be construed or deemed amended to conform to applicable laws, or if it cannot be so construed or deemed amended without, in the determination of the Committee, materially altering the purpose or intent of the Plan or the Award, such provision shall be stricken as to such jurisdiction or Award, and the remainder of the Plan or any such Award shall remain in full force and effect.

(i) No Trust or Fund Created. Neither the Plan nor any Award shall create or be construed to create a trust or separate fund of any kind or a fiduciary relationship between the Company or any Affiliate and a Participant or any other person. To the extent that any person acquires a right to receive payments from the Company or any Affiliate pursuant to an Award, such right shall be no greater than the right of any unsecured general creditor of the Company or any Affiliate.

(j) Other Benefits. No compensation or benefit awarded to or realized by any Participant under the Plan shall be included for the purpose of computing such Participant's compensation or benefits under any pension, retirement, savings, profit sharing, group insurance, disability, severance, termination pay, welfare or other benefit plan of the Company, unless required by law or otherwise provided by such other plan.

(k) No Fractional Common Shares. No fractional Common Shares shall be issued or delivered pursuant to the Plan or any Award, and the Committee shall determine whether cash shall be paid in lieu of any fractional Common Share or whether such fractional Common Share or any rights thereto shall be canceled, terminated or otherwise eliminated.

(l) Clawback and Recoupment. All Awards under this Plan shall be subject to forfeiture or other penalties pursuant to any Company clawback policy, as may be adopted or amended from time to time, and such forfeiture and/or penalty conditions or provisions as determined by the Committee.

(m) Headings. Headings are given to the sections and subsections of the Plan solely as a convenience to facilitate reference. Such headings shall not be deemed in any way material or relevant to the construction or interpretation of the Plan or any provision thereof.

Section 10. Effective Date of the Plan

The Plan was adopted by the Board on April 20, 2021. The Plan shall be subject to approval by the shareholders of the Company at the annual and special meeting of shareholders of the Company to be held on June 1, 2021, and the Plan shall be effective as of the date of such shareholder approval.

Section 11. Term of the Plan

No Award shall be granted under the Plan, and the Plan shall terminate, on the tenth anniversary of the earlier of the date of adoption of the Plan by the Board or date of approval by the Company's shareholders or any earlier date of discontinuation or termination established pursuant to Section 7(a) of the Plan. Unless otherwise expressly provided in the Plan or in an applicable Award Agreement, any Award theretofore granted may extend beyond such dates, and the authority of the Committee provided for hereunder with respect to the Plan and any Awards, and the authority of the Board to amend the Plan, shall extend beyond the termination of the Plan.

APPENDIX C
APTOSE BIOSCIENCES INC.
2021 EMPLOYEE STOCK PURCHASE PLAN

(As Adopted April 20, 2021)

1. Purpose. The purpose of the Plan is to provide employees of the Company and its Designated Subsidiaries with an opportunity to purchase Common Shares through accumulated payroll deductions. The Company's intention is to have the Plan and Offerings thereunder qualify as an "employee stock purchase plan" under Section 423 of the Code. The provisions of the Plan, accordingly, will be construed so as to extend and limit Plan participation in a uniform and nondiscriminatory basis consistent with the requirements of Section 423 of the Code. Notwithstanding the foregoing, and for greater certainty, the Plan may provide employees of the Company and its Designated Subsidiaries with the opportunity to purchase Common Shares through accumulated payroll deductions, which need not qualify an "employee stock purchase plan" under Section 423 of the Code, pursuant to separate sub-plans, appendices, rules or procedures as may be adopted by the Administrator and designed to achieve tax, securities laws or other objectives for Eligible Employees, the Company and the Designated Subsidiaries in locations outside of the United States. Except as otherwise provided herein or determined by the Administrator, such Non-Section 423 opportunities will operate and be administered in the same manner as the Section 423 opportunities.

2. Definitions.

(a) "Administrator" means the Board or any Committee designated by the Board to administer the Plan pursuant to Section 14.

(b) "Applicable Laws" means the requirements relating to the administration of equity-based awards under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Shares are listed or quoted and the applicable laws of any foreign country or jurisdiction, including Canada, where awards are, or will be, granted under the Plan.

(c) "Black Out Period" means any period during which a policy of the Company prevents trading in the Common Shares.

(d) "Board" means the Board of Directors of the Company.

(e) "Code" means the Internal Revenue Code of 1986, as amended. Any reference to a section of the Code herein will be a reference to any successor or amended section of the Code.

(f) "Committee" means a committee of the Board appointed in accordance with Section 14 hereof.

(g) "Common Shares" means the common shares of the Company.

(h) "Company" means Aptose Biosciences Inc., a Canadian corporation.

(i) “Compensation” means an Employee’s base straight time gross earnings, exclusive of payments for overtime, shift premium, incentive compensation, incentive payments, bonuses and other compensation.

(j) “Designated Subsidiary” means any Subsidiary that has been designated by the Administrator from time to time in its sole discretion as eligible to participate in the Plan or any Offering.

(k) “Director” means a member of the Board.

(l) “Eligible Employee” means any individual who is a common law employee of an Employer and is customarily employed for at least twenty (20) hours per week, provided that, the term “employee” shall not include any individual who performs services for the Company or any Designated Subsidiary pursuant to an agreement (written or oral) that classifies such individual’s relationship with the Company or any Designated Subsidiary as other than an employee of the Company or any Designated Subsidiary, regardless of whether such individual is at any time determined to be an employee of the Company or any Designated Subsidiary. For purposes of the Plan, the employment relationship will be treated as continuing intact while the individual is on sick leave or other leave of absence that the Employer approves. Where the period of leave exceeds ninety (90) days and the individual’s right to reemployment is not guaranteed either by statute or by contract, the employment relationship will be deemed to have terminated on the ninety-first (91st) day of such leave. The Administrator, in its discretion, from time to time may, prior to the Offering Date of an Offering, determine (on a uniform and nondiscriminatory basis) that the definition of Eligible Employee will or will not include an individual if he or she: (i) has not completed at least two (2) years of service since his or her last hire date (or such lesser period of time as may be determined by the Administrator in its discretion), (ii) customarily works not more than twenty (20) hours per week (or such lesser period of time as may be determined by the Administrator in its discretion), (iii) customarily works not more than five (5) months per calendar year (or such lesser period of time as may be determined by the Administrator in its discretion), or (iv) is a highly compensated employee under Section 414(q) of the Code with compensation above a certain level or who are Officers or subject to the disclosure requirements of Section 16(a) of the Exchange Act. Notwithstanding any provision of the Plan, the Administrator may in its sole discretion prior to the Offering Date of an Offering determine that citizens or residents of a foreign jurisdiction who are employed by the Company or a Designated Subsidiary shall not be Eligible Employees if, as of the Offering Date of the grant of an Option to citizens or residents of the foreign jurisdiction is prohibited under the laws of such jurisdiction; or compliance with the laws of the foreign jurisdiction would cause the Offering to violate the requirements of Code Section 423. For rules regarding participation of foreign Subsidiaries, Section 27 shall govern.

(m) “Employer” means any one or all of the Company and its Designated Subsidiaries.

(n) “Exchange Act” means the Securities Exchange Act of 1934, as amended, including the rules and regulations promulgated thereunder.

(o) “Exercise Date” means the last Trading Day of each Purchase Period. Notwithstanding the foregoing, the Administrator, in its discretion, from time to time may, prior to the Offering Date of an Offering, determine (on a uniform and nondiscriminatory basis) when the Exercise Dates will occur during a Purchase Period.

(p) “Fair Market Value” means, with respect to Common Shares, the fair market value of such property determined by such methods or procedures as shall be established from time to time by the Administrator. Notwithstanding the foregoing, unless otherwise determined by the Administrator, the Fair Market Value of the Common Shares on a given date for purposes of the Plan shall be the closing price of the Common Shares as reported on the NASDAQ Stock Market or Toronto Stock Exchange, as applicable to the relevant Participant on such date, and any successor securities exchange thereof, or, if the applicable securities exchange is not open for trading on such date, on the most recent preceding date when such exchange is open for trading. In all other cases, Fair Market Value shall mean the amount which is determined by the Administrator, in good faith, to be the fair market value of one Common Share.

(q) “Fiscal Year” means the fiscal year of the Company.

(r) “New Exercise Date” means a new Exercise Date set by shortening any Offering Period then in progress.

(s) “Offering” means the grant of Options to purchase Common Shares under the Plan to Eligible Employees. The terms of each Offering need not be identical; provided, however, that the rights and privileges established with respect to an Offering will apply in an identical manner to all employees of the Company and each Designated Subsidiary that are granted Options under the Offering.

(t) “Offering Date” means the first Trading Day of each Offering Period.

(u) “Offering Period” means, subject to Section 4, the period of time the Administrator may determine prior to an Offering Date, for Options to be granted on such Offering Date, during which an Option granted under the Plan may be exercised, not to exceed twenty-seven (27) months.

(v) “Officer” means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

(w) “Option” means an option to purchase Common Shares during an Offering Period granted pursuant to the Plan.

(x) “Parent” means a “parent corporation,” whether now or hereafter existing, as defined in Section 424(e) of the Code.

(y) “Participant” means an Eligible Employee who holds an outstanding Option granted pursuant to the Plan.

(z) “Plan” means this Aptose Biosciences Inc. 2021 Employee Stock Purchase Plan, as set forth herein and as may be amended from time to time.

(aa) “Purchase Period” means the period during an Offering Period during which Common Shares may be purchased on a Participant’s behalf in accordance with the terms of the Plan or Offering. The duration and timing of Purchase Periods may be established or changed by the Administrator at any time, in its sole discretion. Notwithstanding the foregoing, in no event may a Purchase Period exceed the duration of the Offering Period under which it is established. Unless and until the Administrator provides otherwise, the Purchase Period will have the same duration and coincide with the length of the Offering Period.

(bb) “Purchase Price” shall be determined by the Administrator (on a uniform and nondiscriminatory basis) prior to an Offering Date for all Options to be granted on such Offering Date, subject to compliance with Section 423 of the Code and Treasury regulations promulgated thereunder (or any successor rule or provision or any other Applicable Laws) or pursuant to Section 20. Unless and until the Administrator provides otherwise with respect to an Offering, the Purchase Price will be equal to eighty-five percent (85%) of the Fair Market Value of a Common Share on the Offering Date or the Exercise Date, whichever is lower. If such price contains a fraction of one tenth of one cent, the Purchase Price shall be increased to the next higher tenth of one cent.

(cc) “Securities Act” means the Securities Act of 1933, as amended, including the rules and regulations promulgated thereunder.

(dd) “Subsidiary” means a “subsidiary corporation,” whether now or hereafter existing, as defined in Section 424(f) of the Code.

(ee) “Trading Day” means a day on which the national stock exchange upon which the Common Shares are listed is open for trading.

3. Eligibility.

(a) Offering Periods. Any individual who is an Eligible Employee on a given Offering Date of any Offering Period will be eligible to participate in the Plan, subject to the requirements of Section 5.

(b) Limitations. Any provisions of the Plan to the contrary notwithstanding, no Eligible Employee will be granted an Option under the Plan (i) to the extent that, immediately after the grant, such Eligible Employee (or any other person whose stock would be attributed to such Eligible Employee pursuant to Section 424(d) of the Code) would own capital stock of the Company or any Parent or Subsidiary of the Company and/or hold outstanding options to purchase such stock possessing five percent (5%) or more of the total combined voting power or value of all classes of the capital stock of the Company or of any Parent or Subsidiary of the Company, or (ii) to the extent that his or her rights to purchase stock under all employee stock purchase plans (as defined in Section 423 of the Code) of the Company or any Parent or Subsidiary of the Company accrues at a rate which exceeds twenty-five thousand dollars (\$25,000) worth of stock

(determined at the Fair Market Value of the Common Shares at the time such Option is granted) for each calendar year in which such Option is outstanding at any time.

4. Offering Periods. The Plan will be implemented by consecutive Offering Periods with a new Offering Period commencing on the first Trading Day on or after February 1 and August 1 each year, or on such other date as the Administrator will determine, and continuing thereafter until terminated in accordance with Section 20 hereof. The first Offering Period under the Plan will be determined by the Administrator. The Administrator will have the power to change the duration of Offering Periods (including the commencement dates thereof) with respect to future Offerings without shareholder approval if such change is announced prior to the scheduled beginning of the first Offering Period to be affected thereafter.

5. Participation. An Eligible Employee may participate in the Plan pursuant to Section 3 by (a) submitting to the Company's payroll office (or its designee), on or before a date prescribed by the Administrator prior to an applicable Offering Date, a properly completed subscription agreement, substantially in the form of Exhibit A or such other form suggested by the Administrator, from time to time, authorizing payroll deductions in the form provided by the Administrator for such purpose, or (b) following an electronic or other enrollment procedure prescribed by the Administrator.

6. Payroll Deductions.

(a) At the time a Participant enrolls in the Plan pursuant to Section 5, he or she will elect to have payroll deductions made on each pay day during the Offering Period in an amount not exceeding fifteen percent (15%) of the Compensation which he or she receives on each pay day during the Offering Period; provided, however, that should a pay day occur on an Exercise Date, a Participant will have the payroll deductions made on such day applied to his or her account under the subsequent Purchase or Offering Period. A Participant's subscription agreement will remain in effect for successive Offering Periods unless terminated as provided in Section 10 hereof. Except as may be expressly provided in the Plan, pursuant to separate sub-plan, appendix, rule or procedure as may be adopted by the Administrator, an Eligible Employee may participate in the Plan only by means of payroll deduction.

(b) Payroll deductions for a Participant will commence on the first pay day following the Offering Date and will end on the last pay day prior to the Exercise Date of such Offering Period to which such authorization is applicable, unless sooner terminated by the Participant as provided in Section 10 hereof.

(c) All payroll deductions made for a Participant will be credited to his or her account under the Plan and will be withheld in whole percentages only. A Participant may not make any additional payments into such account. No interest shall be paid to any Participant or credited under the Plan (except as may be required by applicable local laws).

(d) A Participant may discontinue his or her participation in the Plan as provided in Section 10 by (i) properly completing and submitting to the Company's payroll office (or its designee), on or before a date prescribed by the Administrator, the form

provided by the Administrator for such purpose, or (ii) following an electronic or other procedure prescribed by the Administrator. If a Participant has not followed such procedures, the rate of his or her payroll deductions will continue at the originally elected rate throughout the Offering Period and future Offering Periods (unless terminated as provided in Section 10). Unless the Administrator determines otherwise prior to the beginning of an Offering Period, a Participant may not increase or decrease the rate of his or her payroll deductions during the Offering Period, other than a decrease due to a discontinuance of participation. To the extent the Administrator permits changes in payroll deductions, the Administrator may, in its sole discretion, limit the nature and/or number of payroll deduction rate changes that may be made by Participants during any Offering Period.

(e) Notwithstanding the foregoing, to the extent necessary to comply with Section 423(b)(8) of the Code and Section 3(b), or if the Administrator reasonably anticipates a Participant has contributed a sufficient amount to purchase a number of Common Shares equal to or in excess of the applicable limit for such Offering Period (as set forth in Section 7 or as established by the Administrator), a Participant's payroll deductions may be decreased to zero percent (0%) at any time during an Offering Period. Subject to Section 423(b)(8) of the Code and Section 3(b) hereof, for Participants who have had their contributions reduced due to the applicable limits on the maximum number of Common Shares that may be purchased in any Offering Period, payroll deductions will recommence at the rate originally elected by the Participant effective as of the beginning of the first Offering Period which is scheduled to end in the following calendar year, unless terminated by the Participant as provided in Section 10.

(f) At the time the Option is exercised, in whole or in part, or at the time some or all of the Common Share issued under the Plan is disposed of, the Participant must make adequate provision for the Company's or the Employer's federal, state, or any other tax liability payable to any authority, national insurance, Social Security or other tax withholding obligations, if any, which arise upon the exercise of the Option or the disposition of the Common Shares. At any time, the Company or the Employer may, but will not be obligated to, withhold from the Participant's compensation the amount necessary for the Company or the Employer to meet applicable withholding obligations, including any withholding required to make available to the Company or the Employer any tax deductions or benefits attributable to sale or early disposition of Common Shares by the Eligible Employee.

(g) Notwithstanding any provision of the Plan, no payroll deductions may commence during an Offering Period unless the Common Shares to be issued upon exercise of the Options granted in the Offering are covered by an effective registration statement pursuant to the Securities Act. If on an Offering Date the Common Shares are not so registered, no payroll deductions shall take effect on such Offering Date, and the Offering Date shall be delayed until the Common Shares are subject to such an effective registration statement.

(h) Notwithstanding any other provisions of this Plan, if a Blackout Period is in effect, an Eligible Employee subject to the Blackout Period (a) may not enroll (as set forth

in Section 5) until after the end of the Blackout Period, and (b) may not voluntarily discontinue his or her participation in this Plan (as set forth in Section 6) until after the end of the Blackout Period.

7. Grant of Option. On the Offering Date of each Offering, each Eligible Employee participating in such Offering will be granted an Option to purchase on each Exercise Date during the applicable Offering Period (at the applicable Purchase Price) up to a number of Common Shares determined by dividing such Eligible Employee's payroll deductions accumulated prior to such Exercise Date and retained in the Eligible Employee's account as of the Exercise Date by the applicable Purchase Price; provided that in no event will an Eligible Employee be permitted to purchase during each Offering Period more than ten thousand (10,000) Common Shares (subject to any adjustment made by the Administrator and announced prior to the scheduled beginning of the first Offering Period to be affected thereafter or pursuant to Section 19), and provided further that such purchase will be subject to the limitations set forth in Sections 3(b) and 13. The Eligible Employee may accept the grant of such Option by electing to participate in the Plan in accordance with the requirements of Section 5. The Administrator may, for future Offerings, increase or decrease, in its absolute discretion, the maximum number of Common Shares that an Eligible Employee may purchase during each Purchase Period or Offering Period. Exercise of the Option will occur as provided in Section 8, unless the Participant has withdrawn pursuant to Section 10. The Option will expire on the last day of the Offering Period. Without limiting the generality of the foregoing and for greater certainty, the Administrator may limit the number or value of Common Shares available during any 12-month period by Participants in specified countries or working for specified Designated Subsidiaries, if necessary to avoid securities law filings, achieve tax objectives or to meet other Company compliance objectives in particular non-U.S. jurisdictions.

8. Exercise of Option.

(a) Unless a Participant withdraws from the Plan as provided in Section 10, his or her Option will be exercised automatically on the Exercise Date, and the maximum number of full Common Shares subject to the Option will be purchased for such Participant at the applicable Purchase Price with the accumulated payroll deductions in his or her account. No fractional Common Shares will be purchased; any payroll deductions accumulated in a Participant's account which are not sufficient to purchase a full Common Share will be retained in the Participant's account for the subsequent Offering, subject to earlier withdrawal by the Participant as provided in Section 10. Any other funds left over in a Participant's account after the Exercise Date will be returned to the Participant. During a Participant's lifetime, a Participant's Option to purchase Common Shares hereunder is exercisable only by him or her.

(b) Notwithstanding any contrary Plan provision, if the Administrator determines that, on a given Exercise Date, the number of Common Shares with respect to which Options are to be exercised may exceed (i) the number of Common Shares that were available for sale under the Plan on the Offering Date of the applicable Offering Period, or (ii) the number of Common Shares available for sale under the Plan on such Exercise Date, the Administrator may in its sole discretion provide that the Company will make a pro rata allocation of the Common Shares available for purchase on such Offering Date or Exercise

Date, as applicable, in as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all Participants exercising Options to purchase Common Shares on such Exercise Date, and either (A) continue all Offering Periods then in effect or (B) terminate any or all Offering Periods then in effect pursuant to Section 20. The Company may make a pro rata allocation of the Common Shares available on the Offering Date of any applicable Offering Period pursuant to the preceding sentence, notwithstanding any authorization of additional Common Shares for issuance under the Plan by the Company's shareholders subsequent to such Offering Date.

9. *Delivery.* As soon as reasonably practicable after each Exercise Date on which a purchase of Common Shares occurs, the Company will arrange the delivery to each Participant, as appropriate, of the Common Shares purchased upon exercise of his or her Option in a form determined by the Administrator (in its sole discretion) and pursuant to rules established by the Administrator. The Company may permit or require that Common Shares be deposited directly with a broker designated by the Company or to a designated agent of the Company, and the Company may utilize electronic or automated methods of Common Share transfer. The Company may require that Common Shares be retained with such broker or agent for a designated period of time and/or may establish other procedures to permit tracking of disqualifying dispositions of such Common Shares. All certificates for Common Shares delivered pursuant to the Plan and all Common Shares issued pursuant to book entry procedures are subject to any stop-transfer orders and other restrictions as the Administrator deems necessary or advisable to comply with U.S. and non-U.S. federal, state, provincial or local securities or other laws, rules and regulations and the rules of any securities exchange or automated quotation system on which the Common Shares are listed, quoted, or traded. No Participant will have any voting, dividend, or other stockholder rights with respect to Common Shares subject to any Option granted under the Plan until such Common Shares have been purchased and delivered to the Participant as provided in this Section 9. Notwithstanding any other provision of the Plan, unless otherwise determined by the Administrator or required by any applicable law, rule or regulation, the Company may, in lieu of delivering to any Participant certificates evidencing Common Shares issued in connection with any Option, record the issuance of Common Shares in the books of the Company (or, as applicable, its transfer agent or stock plan administrator).

10. *Withdrawal.*

(a) Pursuant to procedures established by the Administrator, a Participant may withdraw all but not less than all of the payroll deductions credited to his or her account and not yet used to exercise his or her Option under the Plan at any time by (i) submitting to the Company's payroll office (or its designee) a written notice of withdrawal in the form prescribed by the Administrator for such purpose, or (ii) following an electronic or other withdrawal procedure prescribed by the Administrator. The Administrator may impose a deadline before an Exercise Date for withdrawing. All of the Participant's payroll deductions credited to his or her account will be paid to such Participant as promptly as practicable after receipt of notice of withdrawal and such Participant's Option for the Offering Period will be automatically terminated, and no further payroll deductions for the purchase of Common Shares will be made for such Offering Period. If a Participant withdraws from an Offering, payroll deductions will not resume at the beginning of the

succeeding Offering Period unless the Participant re-enrolls in the Plan in accordance with the provisions of Section 5 hereof.

(b) A Participant's withdrawal from an Offering will not have any effect upon his or her eligibility to participate in any similar plan which may hereafter be adopted by the Company or in succeeding Offerings which commence after the termination of the Offering from which the Participant withdraws.

11. Termination of Employment. Upon a Participant's ceasing to be an Eligible Employee, for any reason, he or she will be deemed to have elected to withdraw from the Plan and the payroll deductions credited to such Participant's account during the Offering Period but not yet used to purchase Common Shares under the Plan will be returned to such Participant or, in the case of his or her death, to the person or persons entitled thereto under Section 15, and such Participant's Option will be automatically terminated. For greater certainty and without limiting the generality of the foregoing, the date of termination of the Participant's employment for purposes of this Section 11 shall be the date such termination is stated effective in the notice of termination provided by the Company or a Designated Subsidiary to the Participant, and shall not be extended by and shall not include any period during which the Participant is in receipt of, or is eligible to receive, any statutory, contractual or common law notice or compensation in lieu thereof of severance payments following the actual date of termination.

12. Interest. No interest will accrue on the payroll deductions of a Participant in the Plan.

13. Stock.

(a) Subject to adjustment upon changes in capitalization of the Company as provided in Section 19 hereof, the maximum number of Common Shares which will be made available for sale under the Plan will be 1,700,000 Common Shares.

(b) Until the Common Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), a Participant will only have the rights of an unsecured creditor with respect to such Common Shares, and no right to vote or receive dividends or any other rights as a shareholder will exist with respect to such Common Shares.

(c) Common Shares to be delivered to a Participant under the Plan will be registered in the name of the Participant.

14. Administration. The Plan will be administered by the Board or a Committee appointed by the Board, which Committee will be constituted to comply with Applicable Laws. As of the date hereof, the Compensation Committee of the Board is the Administrator of the Plan. The Administrator will have full and exclusive discretionary authority, subject to, and within the limitations of, the express provisions of the Plan:

(a) To determine how and when Options to purchase Common Shares shall be granted and the provisions of each Offering of such Options (which need not be identical);

(b) To designate from time to time which Subsidiaries of the Company shall be eligible to participate in the Plan as Designated Subsidiaries;

(c) To construe, interpret and apply the terms of the Plan and, in the exercise of this power, correct any defect, omission or inconsistency in the Plan, in a manner and to the extent it shall deem necessary or expedient to make the Plan fully effective;

(d) To determine eligibility and to adjudicate all disputed claims filed under the Plan;

(e) To adopt rules or procedures relating to the operation and administration of the Plan, including, without limitation, rules and procedures regarding eligibility to participate in the Plan or any Offering, the definition of Compensation, handling of payroll deductions, making of contributions to the Plan (including, without limitation, in forms other than payroll deductions), establishment of bank or trust accounts to hold payroll deductions, payment of interest, conversion of local currency, obligations to pay payroll tax, withholding procedures and handling of stock certificates which vary with local requirements and such other procedures as are necessary to accommodate the specific requirements of local laws and procedures for jurisdictions outside of the United States;

(f) To adopt such procedures and sub-plans as are necessary or appropriate to permit participation in the Plan by Employees who are foreign nationals or employed outside the United States; and

(g) Generally, to exercise such powers and to perform such acts as it deems necessary or expedient to promote the best interests of the Company and its Subsidiaries and to carry out the intent that the Plan be treated as a tax-qualified employee stock purchase plan.

Every finding, decision and determination made by the Administrator will, to the full extent permitted by law, be final and binding upon all parties. The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revert to the Board some or all of the powers previously delegated. Further, to the extent not prohibited by Applicable Laws, the Board or Committee may, from time to time, delegate some or all of its authority under the Plan to one or more officers of the Company or other persons or groups of persons as it deems necessary, appropriate or advisable under conditions or limitations that it may set at or after the time of the delegation. Whether or not the Board has delegated administration of the Plan to a Committee, the Board shall have the final power to determine all questions of policy and expediency that may arise in the administration of the Plan.

15. *Death of Participant.* In the event of the death of a Participant, the Company shall, subject to local law, deliver any remaining cash balance to the executor or administrator of the estate of the Participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such cash balance to the spouse or to any one or more dependents or relatives of the Participant, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

All Common Shares held by a broker or designated agent of the Company shall be delivered, subject to local law, to such beneficiary named under the brokerage or agent account (or if there is no such beneficiary, as provided under the account).

16. Transferability. Neither payroll deductions credited to a Participant's account nor any rights with regard to the exercise of an Option or to receive Common Shares under the Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 15 hereof) by the Participant. Any such attempt at assignment, transfer, pledge or other disposition will be without effect, except that the Company may treat such act as an election to withdraw from an Offering in accordance with Section 10 hereof.

17. Use of Funds. Except as otherwise required by local law and/or Section 18 herein, the Company may use all payroll deductions received or held by it under the Plan for any corporate purpose, and the Company will not be obligated to segregate such payroll deductions. Until Common Shares are issued, Participants will only have the rights of an unsecured creditor with respect to such Common Shares.

18. Reports. Individual bookkeeping accounts will be maintained for each Participant in the Plan. Statements of account will be given to participating Eligible Employees at least annually, which statements will set forth the amounts of payroll deductions, the Purchase Price, the number Common Shares purchased and the remaining cash balance, if any. Notwithstanding the foregoing, all payroll deductions received under the Plan shall be deposited with the general funds of the Company except where applicable law requires that contributions be deposited with an independent third party.

19. Adjustments, Dissolution, Liquidation, Merger or Change in Control.

(a) Adjustments. In the event that any dividend or other distribution (whether in the form of cash, Common Shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Common Shares or other securities of the Company, or other change in the corporate structure of the Company affecting the Common Shares occurs, the Administrator, in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, will, in such manner as it may deem equitable, adjust the number and class of Common Shares which may be delivered under the Plan, the Purchase Price per share and the number of Common Shares covered by each Option under the Plan which has not yet been exercised, and the numerical limits of Sections 7 and 13 hereof.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, any Offering Period then in progress will be shortened by setting a New Exercise Date, and will terminate immediately prior to the consummation of such proposed dissolution or liquidation, unless provided otherwise by the Administrator. The New Exercise Date will be before the date of the Company's proposed dissolution or liquidation. The Administrator will notify each Participant in writing, at least ten (10) business days prior to the New Exercise Date, that the Exercise Date for the Participant's

Option has been changed to the New Exercise Date and that the Participant's Option will be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 10 hereof.

(c) Corporate Transaction. In the event of any reorganization, merger, consolidation, split-up, spin-off, combination, plan of arrangement, take-over bid or tender offer, repurchase or exchange of Common Shares or other securities of the Company or any other similar corporate transaction or event involving the Company, each outstanding Option will be assumed or an equivalent option or right substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. In the event that the successor corporation refuses to assume or substitute for the Option, the Offering Period with respect to which such Option relates will be shortened by setting a New Exercise Date and will end on the New Exercise Date. The New Exercise Date will occur before the date of the Company's proposed corporate transaction. The Administrator will notify each Participant in writing prior to the New Exercise Date, that the Exercise Date for the Participant's Option has been changed to the New Exercise Date and that the Participant's Option will be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 10 hereof.

20. Amendment or Termination.

(a) The Administrator, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason. If the Plan is terminated, the Administrator, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of Common Shares on the next Exercise Date (which may be sooner than originally scheduled, if determined by the Administrator in its discretion), or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to Section 19). If the Offering Periods are terminated prior to expiration, all amounts then credited to Participants' accounts which have not been used to purchase Common Shares will be returned to the Participants (without interest thereon, except as otherwise required under local laws) as soon as administratively practicable.

(b) Without stockholder consent and without limiting Section 20(a), the Administrator will be entitled to change the Offering Periods, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit payroll withholding in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the Company's processing of properly completed withholding elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Shares for each Participant properly correspond with amounts withheld from the Participant's Compensation, and establish such other limitations or procedures as the Administrator determines in its sole discretion advisable which are consistent with the Plan.

(c) In the event the Administrator determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Administrator may,

in its discretion and, to the extent necessary or desirable, modify, amend or terminate the Plan to reduce or eliminate such accounting consequence including, but not limited to:

- (i) amending the Plan to conform with the safe harbor definition under FASB ASC ¶ 718-50-25-1, including with respect to an Offering Period underway at the time;
- (ii) altering the Purchase Price for any Offering Period including an Offering Period underway at the time of the change in Purchase Price;
- (iii) shortening any Offering Period by setting a New Exercise Date or terminating any outstanding Offering Period and returning contributions made through such date to Participant, including an Offering Period underway at the time of the Administrator action;
- (iv) allocating Common Shares;
- (v) reducing the maximum percentage of Compensation a Participant may elect to set aside as payroll deductions; and
- (vi) reducing the maximum number of Common Shares a Participant may purchase during any Offering Period or Purchase Period.

Such modifications or amendments will not require stockholder approval or the consent of any Plan Participants.

21. *Notices.* All notices or other communications by a Participant to the Company under or in connection with the Plan will be deemed to have been duly given when received in the form and manner specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

22. *Conditions Upon Issuance of Common Shares.* Common Shares will not be issued with respect to an Option unless the exercise of such Option and the issuance and delivery of such Common Shares pursuant thereto will comply with all applicable provisions of law, domestic or foreign, including, without limitation, the Securities Act, the Exchange Act and the requirements of any stock exchange upon which the Common Shares may then be listed, and will be further subject to the approval of counsel for the Company with respect to such compliance. Without limiting the generality of the foregoing, the Administrator shall have the right to require any Participant to comply with any timing or other restrictions with respect to the settlement, distribution or exercise of any Option, including a window-period limitation, as may be imposed in the sole discretion of the Administrator.

As a condition to the exercise of an Option, the Company may require the person exercising such Option to represent and warrant at the time of any such exercise that the Common Shares are being purchased only for investment and without any present intention to sell or distribute such Common Shares if, in the opinion of counsel for the Company, such a representation is required by any of the aforementioned applicable provisions of law.

23. Term of Plan. The Plan will become effective upon its adoption by the Board, but no Options shall be exercised unless and until the Plan has been approved by the stockholders of the Company, which approval shall be within twelve (12) months before or after of its approval by the Board. The Plan will continue in effect until terminated under Section 20 or until no Options are available for grants hereunder.

24. Shareholder Approval. The Plan will be subject to approval by the shareholders of the Company within twelve (12) months after the date the Plan is adopted by the Board. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

25. Covenants of the Company. The Company shall seek to obtain from each federal, state, foreign or other regulatory commission or agency having jurisdiction over the Plan such authority as may be required to issue and sell Common Shares upon exercise of the Options. If, after commercially reasonable efforts, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary for the lawful issuance and sale of Common Shares under the Plan, the Company shall be relieved from any liability for failure to issue and sell Common Shares upon exercise of such Options unless and until such authority is obtained.

26. Not a Contract of Employment. The Plan and Offerings do not constitute an employment contract. Nothing in the Plan or in any Offering shall in any way alter the at will nature of a Participant's employment or be deemed to create in any way whatsoever any obligation on the part of any Participant to continue in the employ of the Company or a Subsidiary, or on the part of the Company or a Subsidiary to continue the employment of a Participant.

27. International Participants. The Committee shall have the power and authority to allow any of the Company's Subsidiaries other than Designated Subsidiaries to adopt and join in a portion of this Plan for employees of any such Subsidiary who are generally not subject to income taxation by the United States, and such portion is not intended to comply with Section 423 of the Code (the "Non-U.S. Portion"). If the Committee allows any Subsidiary other than a Designated Subsidiary to adopt the Non-U.S. Portion of the Plan, the Committee may allow certain employees of such Subsidiaries who work or reside outside of the United States an opportunity to acquire Common Shares in accordance with such special terms and conditions as the Committee may adopt from time to time, which terms and conditions may modify the terms and conditions set forth elsewhere in this Plan, with respect to such employees. Without limiting the authority of the Committee, the special terms and conditions that may be adopted with respect to any foreign country need not be the same for all foreign countries; and may include but are not limited to the right to participate, procedures for elections to participate, the payment of any interest with respect to amounts received from or credited to accounts held for the benefit of such employees who elect to participate, the purchase price of any Common Shares to be acquired, the length of any Offering Period, the maximum amount of contributions, credits or shares that may be acquired by any such participating employees, procedures regarding handling of payroll deductions, conversion of local currency, payroll tax withholding procedures, tax reporting and handling of share certificates which vary with local requirements and a participating employee's rights in the event of his or her death, disability, withdrawal from participation in the purchase of shares under the Non-U.S. Portion of the Plan, or termination of employment. Any rights granted under the Non-U.S. Portion

of the Plan to must be limited to non-resident alien individuals employed by Subsidiaries that are not Designated Subsidiaries and operate outside the United States, such that the grant is treated under section 1.409A-1(b)(8) of the Treasury Regulations as not providing deferred compensation for such individuals.

28. Tax Withholding. At the time of any taxable event that creates a withholding obligation for the Company, a Designated Subsidiary or a Subsidiary, the Participant will make adequate provision for any U.S. and non-U.S. federal, state, provincial and/or local taxes (including, without limitation, income tax, social insurance contributions, fringe benefit tax, employment tax, stamp tax and any employer tax liability which has been transferred to a Participant) for which a Participant is liable in connection with his or her participation in the Plan.. In their sole discretion, and except as otherwise determined by the Administrator, the Company or a Subsidiary that employs or employed the Participant may satisfy their obligations to withhold such tax-related items by (a) increased withholding from the Participant's wages or other compensation, (b) withholding a sufficient whole number Common Shares otherwise issuable following exercise of the Option having an aggregate value sufficient to pay the aforementioned tax-related items required to be withheld with respect to the Option and/or shares, (c) withholding from proceeds from the sale of Common Shares issued upon exercise of the Option, either through a voluntary sale or a mandatory sale arranged by the Company, or (d) cash payments to the Company or a Designated Subsidiary or a Subsidiary, as applicable, by a Participant.

29. Governing Law. The internal law, and not the law of conflicts, of the Province of Ontario shall govern all questions concerning the validity, construction and effect of the Plan or any Option, and any rules and regulations relating to the Plan or any Option.

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8. I hereby agree to be bound by the terms of the Plan and the applicable Offering document. The effectiveness of this Subscription Agreement is dependent upon my eligibility to participate in the Plan.

I UNDERSTAND THAT THIS SUBSCRIPTION AGREEMENT WILL REMAIN IN EFFECT THROUGHOUT SUCCESSIVE OFFERING PERIODS UNLESS TERMINATED BY ME.

Dated:

Signature of Employee

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EXHIBIT B to 2021 Employee Stock Purchase Plan

APTOSE BIOSCIENCES INC.

2021 EMPLOYEE STOCK PURCHASE PLAN

NOTICE OF WITHDRAWAL

The undersigned Participant in the Offering Period of the Aptose Biosciences Inc. 2021 Employee Stock Purchase Plan (the “Plan”) that began on _____ (the “Offering Date”), hereby notifies the Company that he or she hereby withdraws from the Offering Period. He or she hereby directs the Company to pay to the undersigned as promptly as practicable all of the payroll deductions credited to his or her account with respect to such Offering Period. The undersigned understands and agrees that his or her option for such Offering Period will be automatically terminated. The undersigned understands further that no further payroll deductions will be made for the purchase of Common Shares in the current Offering Period and the undersigned will be eligible to participate in succeeding Offering Periods only by delivering to the Company a new Subscription Agreement.

Name: _____

Address: _____

Signature: _____

Date: _____

