

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

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
 Confidential, for Use of the Commission Only (as permitted by Rule 14a 6(c)(2))
 Definitive Proxy Statement
 Definitive Additional Materials
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Aptose Biosciences Inc.

(Name of Registrant as Specified in its Charter)

Not Applicable

(Name of Person(s) Filing Proxy Statement if other than the Registrant)

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Notice and Proxy Statement

**For the
Annual and Special Meeting of Shareholders
to be held on June 4, 2019**

April 25, 2019

Dear Aptose Shareholders,

2019 is an exciting time to be a shareholder of Aptose, and I am personally honored to serve in the key leadership role for this company. Aptose is built upon the hard work and diligence of its employees and subject matter experts, its scientific and clinical advisors, its distinctive clinical assets in CG-806 and APTO-253, its strong scientific data buttressing the assets, and of course its supportive shareholders. We are confident that both of Aptose's pharmaceutical assets, our APTO-253 MYC inhibitor and our CG-806 first-in-class oral small molecule pan-FLT3/pan-BTK inhibitor -- while very different from one another -- represent exciting agents with substantial market opportunities in hematology.

Our previous two years focused on building a solid foundation for our molecules and driving them into the clinic. Our actions included collaborating with the most brilliant of minds in the hematology/oncology field, establishing robust and reliable drug synthesis processes, identifying leading investigators and clinical sites, and maintaining strong communication with investors, the banking industry and the regulatory agencies. We accomplished those key objectives and entered 2019 as a clinical-stage company, and we look forward to a highly productive period in which we seek meaningful and durable clinical proof of concept to place value on our molecules and deliver value creation for the company.

We recently were granted allowance by the FDA to initiate a Phase 1, multicenter, open label, dose-escalation study of CG-806, our oral, first-in-class small molecule inhibitor of the FLT3 and BTK kinases, in patients with chronic lymphocytic leukemia (CLL/SLL) or non-Hodgkin lymphomas (NHL) who have failed other therapies, including ibrutinib. Likewise, CG-806 is being developed for patients with acute myeloid leukemia (AML), a devastating cancer of the blood and bone marrow. Preclinical data support the use of CG-806 broadly in AML patients that have failed other therapies, including other FLT3 inhibitors. In preclinical studies, our researchers and collaborators demonstrated that CG-806 potently inhibits all known forms of FLT3 and BTK, as well as other key oncogenic processes essential for cancer cell survival but with a precision that spares targets and pathways associated with toxicity. Indeed, the preclinical profile of CG-806 is superior to other competitor drugs in the space, and we are hopeful those properties will translate to success in humans. Although drug development takes time, we are all particularly hopeful about CG-806 and believe that it has the potential to serve as a transformational agent for multiple hematologic cancers, including AML, CLL and others.

Separately, our small molecule MYC inhibitor APTO-253 has returned to the clinic in a Phase 1b trial after a hiatus to improve its chemical synthesis and formulation. MYC is the most commonly dysregulated oncogene in cancers and is a key driver of AML and B-cell cancers, as well as certain solid tumors. APTO-253 is the only known clinical-stage molecule that can directly inhibit expression of the MYC oncogene, shown to reprogram survival signaling pathways and contribute to drug resistance in many malignancies, including AML and B cell cancers. Other therapies directed at MYC are limited by severe toxicities, drug resistance and myelosuppression of the healthy bone marrow, which has not been observed in extensive preclinical testing of APTO-253. In our first AML patient administered APTO-253 at the lowest dose, we observed a reduction of MYC expression levels after a 28-day cycle of therapy. We plan to continue to dose escalate and hope to identify a safe dose that effectively inhibits MYC expression and reduces the leukemic burden in AML patients. We continue to exercise prudence in enrolling patients for higher doses of APTO-253 and look forward to reporting our findings. Finally, I wish to thank the clinicians, families and patients for their willingness to participate in our APTO-253 human clinical trial. These are very sick patients and we don't want to lose sight of the fact that they are working with us to create better drugs.

During the past year we received expert guidance and support from our Board of Directors, and we refreshed our Board with the addition of Ms. Carol Ashe and Ms. Caroline Loewy. In addition, we expanded our offices to recruit additional personnel, we presented at multiple scientific, clinical and banking conferences around the world, and we boosted the intellectual property estates protecting our pharmaceutical assets. Our current cash position and access to available sources provide us runway well into the first half of 2020. This comfortably allows us to initiate our clinical trials and collect meaningful clinical data without the need for a near-term financing, though we will continually evaluate our financing and business development opportunities. Although we are proud of our accomplishments as we look in the rear-view mirror, we are keenly focused on the future for Aptose.

As fellow shareholders, we are committed to maximizing shareholder value through the diligent development of our lead assets. I thank you, our shareholders, for your trust and support. We look forward to communicating with you on the progress of the CG-806 and APTO-253 clinical programs as we move forward on this journey.

Sincerely,

William G. Rice, Ph.D.
Chairman, President and CEO

Aptose Biosciences Inc.
Notice of 2019 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 at the Intercontinental Hotel, 901 Bayfront Court, San Diego, California, 92101 United States of America on June 4, 2019 at 10:00AM (Pacific time).

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, 2018, including the auditor’s report thereon;
2. electing seven directors to serve until the 2020 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, 2019;
4. passing an ordinary resolution, the full text of which is set forth in the accompanying proxy statement, ratifying an amendment to the Corporation’s by-laws (the “By-Laws”) to increase the quorum for any meeting of shareholders of the Corporation to two persons present at the opening of the meeting who are entitled to vote thereat either as shareholders or as proxy holders and holding or representing not less than 33 $\frac{1}{3}$ % of the outstanding shares of the Corporation entitled to be voted at such meeting; and
5. 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 accompanying this notice of meeting 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 25, 2019.

You have the right to vote your shares on items 2 through 4 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 8, 2019.

Your vote is important

If you are not able to be present at the 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 31, 2019 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 25, 2019

**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE ANNUAL AND SPECIAL MEETING OF SHAREHOLDERS
TO BE HELD ON JUNE 4, 2019.**

Our Notice of 2019 Annual and Special Meeting of Shareholders, Proxy Statement and Annual Report to Shareholders are available on the Corporation's website at www.aptose.com in the Investors section.

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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 4, 2019 at 10:00 A.M. (Pacific time) at the Intercontinental Hotel, 901 Bayfront Court, San Diego, California, 92101, United States of America and at all adjournments thereof, for the purposes set forth in the accompanying notice of meeting (the "Notice of Meeting"). It is expected that the solicitation will be made primarily by mail but proxies may also be solicited personally by directors, officers, employees or agents of the Corporation. The solicitation of proxies by this Proxy Statement is being made by or on behalf of management of the Corporation. The total cost of the solicitation will be borne by Aptose.

The information contained in this Proxy Statement is given as at April 25, 2019 except where otherwise noted. All references to "dollar" or the use of the symbol "\$" are to United States dollars and use of the symbol "C\$" 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 4, 2019 at 10:00 A.M. (Pacific time) at Intercontinental Hotel, 901 Bayfront Court, San Diego, California, 92101, United States of America.

Who can vote at the Meeting?

Only Shareholders as of the close of business on the record date, being April 25, 2019, 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 proxy card.

At the close of business on the record date, [] 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 proxy card, 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 proxy form (the “proxyholder”) the authority to vote your Shares for you at the Meeting or any adjournment. A proxy form is included with this Proxy Statement.

The management representatives named on the proxy form 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 proxy form. 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 proxy form by 5:00 p.m. (Toronto time) on May 31, 2019 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 proxy form 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. 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 procedures set out below, depending on what type of form they receive.

1. Voting Instruction Form. If the non-registered Shareholder does not wish to attend and vote at the Meeting in person (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 Shareholder's behalf.

If a non-registered Shareholder wishes to attend and vote at the Meeting in person (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 and a form of proxy giving the right to attend and vote will be forwarded to the non-registered Shareholder.

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 Shareholder does not wish to attend and vote at the Meeting in person (or have another person attend and vote on the Shareholder's behalf).

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 in person (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 in person (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.

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

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.

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.

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, 2018, including the auditor's report thereon;
2. Proposal No. 1 - electing seven directors to serve until the 2020 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, 2019;
4. Proposal No. 3 - passing an ordinary resolution, the full text of which is set forth in this proxy statement, ratifying amendments to by-law No. 2 of the Corporation to increase the quorum for any meeting of shareholders of the Corporation to two persons present at the opening of the meeting who are entitled to vote thereat either as shareholders or as proxy holders and holding or representing not less than 33 1/3% of the outstanding shares of the Corporation entitled to be voted at such meeting; and
5. 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 the proposals listed above.

What votes may I cast with regard to each proposal?

You can choose to vote "For" or "Withhold" for Proposal No. 1 and "For", "Against" or "Abstain", for Proposal Nos. 2 and 3. The Shares represented by the proxy form 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 proxy form and do not tell us how you want to vote your Shares, your Shares will be voted "FOR" each director nominee and each proposal by the management representatives named in the proxy.

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, 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 ratification of the amendments to by-law No. 2 of the Corporation requires a majority of the votes cast at the Meeting, and votes cast only include those votes cast "For" or "Against" the proposal.

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 and 3: If you select “Abstain,” your vote will have no effect on the votes cast for the purposes of approving each proposal.

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

If as a registered Shareholder you do not cast your vote in person 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 the rest of the proposals 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:
 - (i) at our registered office at any time before 5:00 p.m. (Toronto time) on June 3, 2019, or on the last business day before any adjournment of the Meeting at which the proxy is to be used, or
 - (ii) with the chair of the Meeting prior to the commencement of the Meeting on the day of the Meeting or any adjournment of the Meeting; or
- (c) 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 proxy cards and VIFs in order to vote all of the Shares you own. Please make sure you return each proxy card or VIF in the accompanying return envelope. You may also vote by Internet, telephone, facsimile or email 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.

How can I make a Shareholder proposal for the 2020 Annual General Meeting?

If you want to propose a matter for consideration at our 2020 Annual General Meeting, then that proposal must be received at our registered office at 251 Consumers Road, Suite 1105, Toronto, ON M2J 4R3 by January 9, 2020. 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 CA\$2,000 in market value, or 1%, 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 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 9, 2020.

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 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, 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 Mr. Gregory Chow, Senior Vice President, Chief Financial 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 present or 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 Securities Exchange Act of 1934, as amended (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, 2018, as amended. 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 April 25, 2019 [] Shares are issued and outstanding. Each holder of Shares of record at the close of business on April 25, 2019, the record date established for notice of the Meeting, 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 February 28, 2019 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 February 28, 2019. 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 February 28, 2019 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
Named Executive Officers and Directors			
Carol G. Ashe		-	*
Dr. Denis Burger		129,922	*
Gregory K. Chow		821,185	2.04%
Caroline Loewy		12,500	*
Dr. Erich Platzer		203,334	*
Dr. William G. Rice		1,516,647	3.77%
Dr. Mark D. Vincent		113,917	*
Warren Whitehead		155,834	*
All Executive Officers and Directors as a Group (eight persons)		2,953,339	7.34%
Beneficial Owners of More Than 5%			
Herbert Abramson ⁽²⁾		3,717,000	9.23%
DRW Securities, LLC ⁽³⁾		2,473,135	6.14%
*Does not exceed one percent of common shares outstanding			
(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 February 28, 2019: 113,668 for Dr. Denis Burger, 709,171 for Mr. Gregory Chow, 12,500 for Caroline Loewy, 88,334 for Dr. Erich Platzer, 1,383,633 for Dr. William G Rice, 107,417 for Dr. Mark D. Vincent, 105,834 for Mr. Warren Whitehead.		
(2)	Based on information contained in a Schedule 13G/A filed with the SEC on January 16, 2019 by Herbert Abramson, 22 St. Clair Avenue East, 18th Floor, Toronto, Ontario, Canada, M4T 2S3. The filing indicated that as of December 31, 2018, Mr. Abramson had sole voting and dispositive power over all of these shares, of which 103,611 shares are held through Technifund Inc., an investment holding company of which Mr. Abramson holds 100% of the outstanding preferred shares and serves as President and sole Director.		
(3)	Based on information contained in a Schedule 13G filed with the SEC on February 8, 2019 by DRW Securities, LLC, 540 West Madison Street, Suite 2500, Chicago, Illinois 60661. The file indicated that as of December 31, 2018, DRW Securities, LLC had sole voting and dispositive power over all of these shares.		

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our directors and executive officers and all persons who beneficially own more than 10 percent of the outstanding shares of our Shares to file with the SEC initial reports of ownership and reports of changes in ownership of our Shares. Directors, executive officers and greater than 10 percent beneficial owners also are required to furnish us with copies of all Section 16(a) forms they file with the SEC. To our knowledge, based on a review of the copies of such reports and amendments to such reports furnished to us with respect to the year ended December 31, 2018, and based on written representations by our directors and executive officers, all required Section 16(a) reports under the Exchange Act, for our directors, executive officers and beneficial owners of greater than 10 percent of our Shares were filed on a timely basis during the year ended December 31, 2018.

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, 2018 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).

Dr. Bradley Thompson resigned from the Board effective June 5, 2018. Ms. Caroline Loewy and Ms. Carol Ashe were appointed to the Board on April 25, 2018 and August 15, 2018, respectively.

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

Director	Experience and Qualifications
Carol G. Ashe ⁽²⁾⁽³⁾ Pennsylvania, United States Director Since August 2018	Ms. Ashe, age, 61, 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'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, 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. 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. 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.

Director	Experience and Qualifications
<p>Dr. Denis Burger⁽¹⁾⁽²⁾⁽⁴⁾ Oregon, United States Director Since 2007</p>	<p>Dr. Burger, age 75, 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 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 52, is a corporate director. She 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 she is a member of the National Advisory Council of the Translational Genomics Research Institute (TGen) Center for Rare Childhood Disorders. She is also a founding board member 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 University.</p> <p>Ms. Loewy sits on the board of directors of CymaBay Therapeutics Inc. (2016 to present)* and PhaseBio Pharmaceuticals Inc. (2018 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>

Director	Experience and Qualifications
<p>Dr. Erich Platzer⁽²⁾ Basel, Switzerland Director Since 2014</p>	<p>Dr. Platzer, age 68, 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 Probiodrug, AOT, Léman Micro Devices, and Credentis, as well as a board member of Peripal and as a director and venture partner of MedTech Innovation Partners, MTIP, a Swiss VC firm focusing on MedTech and eHealth, He also serves 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 60, 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 1990 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 Director Since 2007</p>	<p>Dr. Vincent, age 66, 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, where he has been since 1990. Dr. Vincent has also served as the co-founder and Chief 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>

Director	Experience and Qualifications
Warren Whitehead ⁽¹⁾ Ontario, Canada Director Since 2011	<p>Mr. Whitehead, age 67, 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 is the Chairman 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:

- established a written mandate of the Board;
- established a written charter for the Audit Committee;
- established a written charter for the Compensation Committee;
- established a written charter for the Corporate Governance and Nominating Committee;
- 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.aptose.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.
Erich Platzer	Probiodrug AG

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 of Directors 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 of Directors. The Board and its committees fulfill their oversight responsibilities with the supported 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 of Directors 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 of Directors conducts general risk oversight in connection with its role in reviewing our key long-term and short-term business strategies and monitoring on an on-going 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 2018, we received no recommendations of director candidates from our Shareholders. Ms. Ashe and Ms. Loewy were both recommended by a third party search firm.

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 2020 Annual Meeting, Shareholders should submit the required information to the Secretary by the date not less than 30 days before the 2020 Annual Meeting; provided, however, that if the 2020 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, education, race and gender, 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 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 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, race and gender 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 female representation and diversity 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 female representation on the Board and in management positions and, where appropriate, recruiting qualified female candidates 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 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 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 none (0%) of the executive officers of the Corporation are women, and two (29%) of the directors are women.

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 13 meetings during 2018. All of our directors attended at least 75 percent or more of the aggregate meetings of the Board of Directors and all committees on which they served during our fiscal 2018. All of the directors, with the exception of Ms. Ashe, who was not yet a director at that time, attended last year's Annual Meeting of Shareholders.

The following table illustrates the attendance record of each director for all Board meetings held for the year ended December 31, 2018.

Director	Meetings Attended
Carol G. Ashe	1 of 1
Denis Burger	6 of 6
Caroline M. Loewy	3 of 4
Erich Platzer	6 of 6
William G. Rice	6 of 6
Mark Vincent	6 of 6
Warren Whitehead	6 of 6

Executive Sessions

The independent directors meet regularly without the presence of non-independent directors and members of management. During the year ended December 31, 2018, independent directors met twice without the presence of management non-independent directors.

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 Mr. Gregory K. Chow, Aptose Senior Vice President, Chief Financial 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 four times during the period from January 1, 2018 until December 31, 2018.

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 Committee had one formal meeting during the period from January 1, 2018 until December 31, 2018 and also had informal meetings throughout the year.

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 twice during the period from January 1, 2018 until December 31, 2018.

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.

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. KPMG LLP will be in office until the next annual Shareholders’ meeting or until a successor is named.

Representatives of KPMG LLP will be present at the Meeting to respond to appropriate questions. They will also have an opportunity to make a statement if they wish to do so.

Board Recommendation

The Board unanimously recommends a vote FOR the appointment of KPMG LLP as the independent registered public accounting firm of the Corporation to hold office until the next annual meeting of Shareholders.

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, 2017 and 2018, respectively.

	Aggregate Amount Billed ⁽⁵⁾	
	2018	2017
Audit Fees ⁽¹⁾	\$ 104,193	\$ 96,263
Audit Related Fees ⁽²⁾	187,084	154,328
Tax Fees ⁽³⁾	20,985	-
All Other Fees ⁽⁴⁾	-	-
Total	\$ 312,262	\$ 250,591

- (1) Audit fees consisted of the audit of our annual financial statements for the fiscal years ended December 31, 2017 and 2018, respectively.
- (2) Audit-related 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 statements and are not reported under “Audit Fees” above and include the provision of comfort letters and consents, the consultation concerning financial accounting and reporting of specific issues and the review of documents filed with regulatory authorities.
- (3) Tax fees include fees billed for tax compliance, tax advice and tax planning services, including the preparation of original tax returns; tax consultations, tax planning services; and consultation and planning services
- (4) All other fees include the aggregate fees billed for products and services provided by the auditors, other than the services reported above
- (5) All fees by KPMG are invoiced and paid in Canadian dollars. Fees for 2018 have been translated to US dollars at the Bank of Canada average annual exchange rate of 0.7718, and fees for 2017 have been translated to US dollars at the Bank of Canada average annual exchange rate of 0.7701.

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 2018 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, 2018.

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, 2018 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 under Public Company Accounting Oversight Board standards, including matters required to be discussed by the Statement on Auditing Standards No. 61, as amended. 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, 2018 be included in our Annual Report on Form 10-K for the year ended December 31, 2018 for filing with the Securities and Exchange Commission.

Audit Committee
Warren Whitehead, Chair
Denis Burger
Caroline Loewy

PROPOSAL NO. 3 - AMENDMENT TO BY-LAW NO. 2

On November 30, 2018, the Board approved amendments to by-law No. 2 of the Corporation in connection with the transition of the Corporation to the status of “domestic issuer” in the United States as of January 1, 2019, and the Corporation becoming subject to the reporting requirements of the U.S. Securities and Exchange Commission applicable to domestic companies (the “Amended By-Law No. 2”). When it became a domestic issuer in the United States, the Corporation also became subject to the minimum quorum requirement set forth in Section 5620(c) of the Nasdaq listing standards, which provides that in no case shall quorum at a meeting of shareholders be less than 33 1/3% of the outstanding shares of a company’s common voting stock.

The Amended By-Law No. 2 increases the quorum for any meeting of Shareholders to two persons present at the opening of the meeting who are entitled to vote thereat either as Shareholders or as proxy holders and holding or representing not less than 33^{1/3}% of the outstanding Shares entitled to be voted at such meeting. Section 8 (Shareholders' Meeting – Quorum) of the By-Law No. 2 is replaced by the following:

“Except as otherwise provided in the Articles of the Corporation, the quorum for the transaction of business at any meeting of shareholders shall be two persons present at the opening of the meeting who are entitled to vote thereat either as shareholders or as proxy holders and holding or representing not less than 33 1/3% of the outstanding shares of the Corporation entitled to be voted at such meeting. If a quorum is not present within such reasonable time (determined by the chair of the meeting) after the time fixed for the holding of the meeting, the persons present and entitled to vote thereat may adjourn the meeting to a fixed time and place. A person participating in a meeting by means of telephonic, electronic or other communication facilities shall be deemed for the purposes hereof to be present at the meeting.”

Although the Amended By-Law No. 2 went into effect on November 30, 2018, Shareholders must confirm the Amended By-Law No. 2 at the Meeting. If Shareholders do not approve the ordinary resolution confirming the adoption of the Amended By-Law No. 2, it will no longer be valid.

At the Meeting, Shareholders will be asked to consider and, if deemed appropriate, to approve, a resolution in the form set out below (the “By-Law Amendment Resolution”), subject to such amendments, variations or additions as may be approved at the Meeting, ratifying the adoption of the Amended By-Law No. 2. In order to be passed, the By-Law Amendment Resolution must be passed by a majority of the votes cast by Shareholders present in person or by proxy at the Meeting.

The text of the By-Law Amendment Resolution to be submitted to Shareholders at the Meeting is set forth below:

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

1. the Amended By-Law No. 2 of the Corporation is hereby ratified without amendment.
2. 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 resolution.

Board Recommendation

The Board unanimously recommends a vote FOR the ratification of the Amended By-Law No. 2.

EXECUTIVE COMPENSATION

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 and Chief Executive Officer, Dr. William G. Rice, whose biography is listed above, and our Chief Financial Officer, Gregory K. Chow.

Gregory K. Chow, age 46, joined Aptose as Senior Vice President and Chief Financial Officer in December 2013. Previously, Mr. Chow served as Managing Director, Director of Private Placements at Wedbush Securities from 2012 to 2013, where he led the private placement capital activities within the Life Sciences Investment Banking Group. Prior to joining Wedbush, he was a Director in the Private Placements / Equity Capital Markets Group at RBC Capital Markets from 2006 to 2011, where he led life science private capital activities. From 2003 to 2006, he led the Private Capital Group at Wells Fargo Securities and was a Senior Auditor at BDO Seidman, LLP in their Century City, CA office. Mr. Chow is a Certified Public Accountant (inactive) in the State of California. Mr. Chow received his MBA in Finance from The Wharton School at the University of Pennsylvania, and his BA in Business Economics with an emphasis in Accounting from the University of California, Santa Barbara.

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's current agreement also provides for stock option grants, which are governed by the terms of the Corporation's Stock Option Plan and the applicable stock option agreement, Dr. Rice receives 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% nonelective company contribution, a monthly payment of \$2,000 until such time that the Corporation establishes a group health coverage plan (the Aptose group health coverage plan for US employees was established in July 2014 at which time such monthly payments ceased), 25 days of paid vacation time annually, and an annual automobile allowance of \$14,400. Dr. Rice is subject to certain non-confidentiality restrictions.

Aptose entered into an employment agreement with Mr. Chow upon his commencement as Chief Financial Officer, effective November 29, 2013. Pursuant to the employment agreement, Mr. Chow is entitled to an annual base salary of \$315,000, which amount is reviewed annually by the Board and increased at the Board's discretion, upon the advice of the Compensation Committee. Mr. Chow 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 Mr. Chow's achievement of objectives and milestones to be determined on an annual basis by the Board. Mr. Chow's agreement also provides for stock option grants which are governed by the terms of the Corporation's Stock Option Plan and the applicable stock option agreement, and termination benefits described under "Termination and Change of Control Benefits," below. Mr. Chow also receives employee benefits, including, without limitation, participation in any 401(k) plan with a 3% nonelective 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. Mr. Chow is subject to certain non-confidentiality restrictions.

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 the share option plan (the "Share Option Plan"), the stock incentive plan (the "SIP"), 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 the Share Option Plan and SIPs.

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 2015, the Compensation Committee retained Radford (an Aon Consulting Company), to provide independent advice to the Compensation Committee. Radford was retained to assist in developing the Corporation's compensation philosophy and identifying a peer group of companies as well as perform an assessment of the competitiveness of the Corporation's executive compensation process. Radford does 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 does not create any conflict of interest.

Radford was engaged by the Compensation Committee in 2018 to provide guidance for executive compensation in 2019.

Comparator Group

In 2015, 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. and Canadian biotechnology companies which range in size from approximately ½× to 3× the market capitalization of the Corporation (as of April 2015). The companies comprising the comparator group are as follows:

Comparator Group Companies	
Actinium Pharmaceuticals, Inc.	MediciNova, Inc.
Anthera Pharmaceuticals, Inc.	MEI Pharma, Inc.
Argos Therapeutics, Inc.	OncoGenex Pharmaceuticals, Inc.
ArQule, Inc.	Onconova Therapeutics, Inc.
AVEO Pharmaceuticals, Inc.	Oncothyreon Inc.
BIND Therapeutics, Inc.	OXiGENE, Inc.
Celator Pharmaceuticals, Inc.	Stemline Therapeutics, Inc.
CytRx Corporation	Sunesis Pharmaceuticals, Inc.
Fortress Biotech, Inc.	TetraLogic Pharmaceuticals Corporation
Heat Biologics, Inc.	Trillium Therapeutics Inc.

Pay Positioning

The Corporation targets total cash compensation (salary and short-term incentive) somewhat above the 50th percentile of the comparator group, and provides long-term incentive opportunities in the 50th to 75th percentile of the comparator group. The Compensation Committee believes that this aligns executive compensation with the long-term interests of shareholders and with the Corporation’s strategy. In 2015, 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, the Compensation Committee set compensation for the executives for 2015 aligned with the target pay positioning set out above. Compensation for the executives was not compared to the comparator group by the Compensation Committee in 2018.

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, 2018, 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, 2018 was measured with respect to the following objectives:

- 1) Achievement of certain milestones relating to the preclinical development for IND filing, and market awareness of CG-806.
- 2) Achievement of certain milestones relating to the efforts to lift the APTO-253 clinical hold.
- 3) Metrics related to the improvement of the financial position and market recognition and coverage of the Corporation.

- 4) Metrics related to corporate development and strategic activities, including in connection with competitive positioning and partnering, intellectual property portfolio and human resources.

Each of the above objectives is weighted at 40%, 30%, 20% and 10%, 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 under our Share Option Plan and of stock-based awards comprised of restricted stock units (the "Restricted Stock Units") or dividend equivalents (the "Dividend Equivalents") under our SIP.

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, 2018 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 on the last trading day prior to the grant. Options to purchase Shares expire ten years from the date of grant and vest over a term determined by the Compensation Committee. The Compensation Committee takes into account previous grants of options when considering new grants of options.

The granting of options to Named Executive Officers is included in the Summary Compensation Table in the year in which they are earned.

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 or directors are not permitted to purchase financial instruments that are designed to hedge or offset a decrease in market value of 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, 2017 and December 31, 2018 of the Corporation for the Chairman, President and Chief Executive Officer and the Senior Vice President and Chief Financial Officer (each, an “NEO” and, collectively the “Named Executive Officers”). All amounts presented 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	2018	540,244	167,500	1,498,970	270,122	22,650	2,499,486
	2017	520,395	57,500	122,182	260,198	22,500	982,775
Mr. Gregory K. Chow Senior Vice President and Chief Financial Officer	2018	375,950	167,500	1,083,387	150,380	8,250	1,785,467
	2017	356,703	57,500	122,182	142,681	8,100	687,166

(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 9 to our audited consolidated financial statements included in the Corporation’s Annual Report on Form 10-K for the fiscal year ended December 31, 2018 (the “Original 10-K”). These amounts do not necessarily correspond to the actual value recognized or that may be recognized by the NEOs. Dr. Rice and Mr. Chow were each granted 50,000 restricted share units (RSUs) during each of 2017 and 2018, respectively; the RSUs vested over a three month period. Stock awards are subject to the executives’ continued employment with the Corporation. All stock awards issued to Dr. Rice and Mr. Chow 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 stock 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 9 to our audited consolidated financial statements included in the Corporation’s Original 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, 2017, Dr. Rice and Mr. Chow were each awarded 150,000 stock options with vesting periods of four years. The awards granted in 2018 included 700,000 stock options for Dr. Rice, of which 300,000 vested immediately, and 400,000 that will vest over four years, and 500,000 stock options for Mr. Chow of which 150,000 vested immediately and 350,000 that will vest over four years. Stock options are subject to the executives’ continued employment with the Corporation and have a maximum term of 10 years. All stock option grants issued to Dr. Rice and Mr. Chow 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 reflects the Corporation’s contributions to the executives’ accounts in our 401(k) plan in the amount of \$8,100 each for 2017 and \$8,250 each for 2018, and for Dr. Rice’s car allowance, which was \$14,400 in both 2017 and 2018.

Outstanding Equity Awards at Fiscal Year-End

Name and Principal Position	Share-based Awards			Option exercise price (\$) ⁽¹⁾	Option expiration date
	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable			
Dr. William G. Rice Chairman, President and Chief Executive Officer	35,417	Nil		2.55 ⁽⁶⁾	Oct 27, 2023
	65,136	Nil		5.37 ⁽⁷⁾	Dec 10, 2023
	5,281	Nil		5.10 ⁽⁸⁾	Jan 29, 2024
	140,000	Nil		4.40 ⁽⁹⁾	Apr 10, 2024
	396,129	Nil		4.18 ⁽¹⁰⁾	Jun 15, 2024
	100,000	20,000 ⁽¹⁾		5.10 ⁽¹¹⁾	Jun 9, 2025
	40,000	20,000 ⁽²⁾		2.80 ⁽¹²⁾	Mar 30, 2026
	50,000	50,000 ⁽³⁾		1.11 ⁽¹³⁾	Mar 28, 2027
	25,000	25,000 ⁽⁴⁾		1.03	Jun 6, 2027
	300,000	Nil		2.80	Jan 19, 2028
	Nil	400,000 ⁽⁵⁾		3.07	Jan 22, 2028
Mr. Gregory K. Chow Senior Vice President and Chief Financial Officer	35,417	Nil		6.86 ⁽¹⁴⁾	Nov 4, 2023
	35,417	Nil		5.37 ⁽⁷⁾	Dec 10, 2023
	35,417	Nil		4.40 ⁽⁹⁾	Apr 10, 2024
	22,083	Nil		4.18 ⁽¹⁰⁾	Jun 15, 2024
	64,167	Nil		3.87 ⁽¹⁵⁾	Jul 18, 2024
	50,000	10,000 ⁽¹⁾		5.10 ⁽¹¹⁾	Jun 9, 2025
	40,000	20,000 ⁽²⁾		2.80 ⁽¹²⁾	Mar 30, 2026
	50,000	50,000 ⁽³⁾		1.11 ⁽¹³⁾	Mar 28, 2027
	25,000	25,000 ⁽⁴⁾		1.03	Jun 6, 2027
	150,000	Nil		2.80	Jan 19, 2028
	Nil	350,000 ⁽⁵⁾		3.07	Jan 22, 2028

1. Unexercisable options vest on June 9, 2019.

2. Unexercisable options vest as follows: 50% vest on March 30, 2019 and 50% vest on March 30, 2020.

3. Unexercisable options vest as follows: 33.33 % vest on March 28, 2019, 33.33% vest on March 28, 2020 and 33.33% vest on March 28, 2021.

4. Unexercisable options vest as follows: 33.33% vest on June 6, 2019, 33.33% vest on June 6, 2020 and 33.33% vest on June 6, 2021.

5. Unexercisable options vest as follows: 50% vest on January 22, 2029, 16.67 % vest on January 22, 2020, 16.67% vest on January 22, 2021, and 16.67% vest on January 22, 2022.

6. Converted from the Canadian exercise price of \$3.48 at the conversion rate of 0.7333

7. Converted from the Canadian exercise price of \$7.32 at the conversion rate of 0.7333

8. Converted from the Canadian exercise price of \$6.96 at the conversion rate of 0.7333

9. Converted from the Canadian exercise price of \$6.00 at the conversion rate of 0.7333

10. Converted from the Canadian exercise price of \$5.70 at the conversion rate of 0.7333

11. Converted from the Canadian exercise price of \$6.96 at the conversion rate of 0.7333

12. Converted from the Canadian exercise price of \$3.82 at the conversion rate of 0.7333

13. Converted from the Canadian exercise price of \$1.52 at the conversion rate of 0.7333

14. Converted from the Canadian exercise price of \$9.36 at the conversion rate of 0.7333

15. Converted from the Canadian exercise price of \$5.28 at the conversion rate of 0.7333

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 nonelective 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 and Mr. Chow 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 and Mr. Chow 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, 2018 annual base salary represents \$540,244 and Mr. Chow’s December 31, 2018 annual base salary represents \$375,950), 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 and Mr. Chow 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 and Mr. Chow 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 and Mr. Chow 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 and Mr. Chow provide that in the event of their termination, other than for cause, the vesting and exercisability of all then outstanding unvested stock options, restricted shares 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.

The following table sets out the amount that would have been payable to each NEO had there been a change of control of the Corporation on December 31, 2018 and the severance payment that would have been payable to each NEO had the Corporation terminated employment of the NEO without cause on December 31, 2018:

Name	Termination Without Cause	Change of Control
Dr. William G. Rice	\$759,000(1)	\$1,139,000 (2)
Mr. Gregory K. Chow	\$496,000(1)	\$744,000(2)

(1) This amount represents 12 months of annual base salary at the time of termination, 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 (assumed at 100%), as well as continuation of the payments related to health benefits for a period of 12 months following the termination.

(2) This amount represents 18 months of annual base salary 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 (assumed at 100%), as well as continuation of the payments related to health benefits for a period of 12 months following the termination.

DIRECTOR COMPENSATION

Overview

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

Cash Compensation

Directors are entitled to an annual fee of \$40,000 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 annual fee of \$12,000 with each committee member receiving an annual fee of \$8,000 per committee. All fees are paid in quarterly installments.

Non-executive 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 director will be entitled to an option grant of 25,000 options under the Stock 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 director for the year ended December 31, 2018:

Name	Fees earned or paid in cash (\$)	Option awards ⁽¹⁾⁽²⁾ (\$)	Total (\$)
Carol G. Ashe ⁽³⁾	28,000	55,278	83,278
Caroline M. Loewy ⁽³⁾	42,000	57,335	99,335
Dr. Denis Burger	100,000	121,713	221,713
Brad Thompson ⁽³⁾	32,000	121,713	153,713
Dr. Mark Vincent	52,000	121,713	173,713
Mr. Warren Whitehead	52,000	121,713	173,713
Dr. Erich Platzer	48,000	121,713	169,713

- (1) The dollar amounts in this column reflect the aggregate grant date fair value of all stock 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 9 to our audited consolidated financial statements included in the Corporation's Original 10-K. These amounts do not necessarily correspond to the actual value recognized or that may be recognized by the non-employee directors.
- (2) The aggregate number of shares subject to outstanding stock options held by each of the non-employee directors listed in the table above as of December 31, 2018 was as follows: 25,000 for Ms. Ashe, 25,000 for Ms. Loewy, 120,334 for Dr. Burger, 114,083 for Dr. Vincent, 112,500 for Mr. Whitehead, 95,500 for Dr. Platzer, and 35,750 for Mr. Thompson
- (3) Mr. Thompson resigned from the Board effective June 5, 2018. Ms. Loewy joined the Board effective April 25, 2018, and Ms. Ashe joined the Board effective August 15, 2018. In recognition of his service, all of Mr. Thompson's outstanding options vested immediately and will expire on June 5, 2019.

EQUITY COMPENSATION PLAN INFORMATION

General

As of December 31, 2018, the total number of Shares subject to outstanding awards and available for issuance by the Corporation under the Share Option Plan and the SIP was 6,678,316. The 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, 2018. As of December 31, 2018, there were outstanding options to purchase 4,487,105 Shares issued under the Share Option Plan, representing 11.8% of the issued and outstanding Shares of the Corporation and no Restricted Stock Units issued and outstanding under the SIP. Therefore, 2,191,211 Shares remain available for future issuance under the Share Option Plan and the SIP, representing 5.7% of the issued and outstanding Shares of the Corporation.

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 SIP and any other security based compensation arrangement, is 17.5% of the Corporation's issued and outstanding Shares at any given time. Any exercise of options pursuant to the Share Option Plan will make new option grants available under the Share Option Plan, provided that the maximum number of Shares reserved for issuance collectively under the Share Option Plan and the SIP may not exceed 17.5% of the Corporation's issued and outstanding Shares at any given time.

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, 2018.

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.

Stock Incentive Plan

The Corporation adopted the SIP following shareholder approval on June 10, 2015. Pursuant to the SIP, the Board may grant stock-based awards comprised of Restricted Stock Units or Dividend Equivalents (collectively, the “Awards”) to employees, officers, consultants, independent contractors, advisors and non-employee directors of the Corporation or any affiliate (the “SIP Participants”).

The maximum total number of shares available for issuance under the SIP and any other security based compensation arrangement of the Corporation (including the Share Option Plan) is 17.5% of the number of issued and outstanding Shares. Any issuance of Shares covered by an Award or to which an Award relates will make new grants available under the SIP. Since the adoption of the SIP, no Awards have been granted.

Under the SIP, Restricted Stock Units 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 installments or otherwise as the Board may deem appropriate; provided, however, that the Restricted Stock Units may not vest until at least 3 months after the date of grant.

Under the SIP, the Board may also grant Dividend Equivalents to SIP Participants under which the Participant shall be entitled to receive payments (in cash, Shares, other securities, other 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 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 SIP does not limit insider participation and does not provide a maximum number of Shares which may be issued to an individual under the SIP. However, no director of the Corporation who is not also an employee of the Corporation or an affiliate may be granted any 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 SIP and to applicable law, the Board shall have full power and authority to: (i) designate SIP Participants; (ii) determine the type of Awards to be granted to each SIP Participant under the SIP and the number of Shares to be covered by each Award; (iii) 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, Shares or other amounts payable with respect to any Award; (iv) amend the terms and conditions of any Award or Award Agreement, subject to the limitations under Section 7 of the SIP; and (v) accelerate the exercisability of any Award or the lapse of any restrictions relating to any Award, subject to the limitations in Section 7 of the SIP.

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

The Board may from time to time amend, suspend or terminate the SIP, and the Board may amend or alter any previously granted 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 SIP 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 SIP; (ii) amend the eligibility for, and limitations or conditions imposed upon, participation in the 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 SIP, including the terms of any administrative guidelines or other rules related to the 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 Plan or an 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 SIP; (iii) increase the annual limit on Awards granted to non-employee directors; or (iv) amend the amendment provision of the SIP.

Except as otherwise determined under the SIP, upon a SIP Participant's termination of employment or resignation or removal as a Director during the applicable restriction period, all Restricted Stock Units held by such 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 SIP may waive in whole or in part any or all remaining restrictions with respect to Restricted Stock Units.

Employee Share Purchase Plan

We have an Employee Share Purchase Plan (“ESPP”), the purpose of which is to assist the Corporation in retaining the services of its employees, to secure and retain the services of new employees and to provide incentives for such persons to exert maximum efforts for the success of the Corporation. The ESPP provides 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 ESPP include all employees, including executive officers, who work at least 20 hours per week and are customarily employed by the Corporation or an affiliate of the Corporation for at least six months per calendar year. Generally, each offering is of three months’ duration with purchases occurring every quarter. Participants may authorize payroll deductions of up to 15% of their base compensation for the purchase of Shares under the ESPP.

During the year ended December 31, 2018, under the ESPP, Named Executive Officers, as a group, and employees did not purchase any Shares pursuant to the ESPP. Since December 31, 2018, there have been no Shares purchased pursuant to the ESPP.

Equity Compensation Plan Information

The following table sets forth certain details as at the end of the year ended December 31, 2018 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 (1)	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)) (2)
	(a)		(c)
Equity compensation plans approved by security holders	4,487,105	\$ 3.11	2,191,211
Equity compensation plans not approved by security holders			
Total	4,487,105		2,191,211

1. Includes stock options exercisable for 2,543,728 shares granted under the Share Option Plan.

2. Includes stock option awards, restricted share units, and Dividend Equivalents that may be awarded under our Share Option Plan and SIP as at December 31, 2018. There are no shares subject to outstanding rights to purchase or shares remaining issuable under our Employee Stock Purchase Plan as at December 31, 2018.

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

The following table provides information on the securities issuable collectively under the Stock Option Plan and SIP, expressed as a number and as a percentage of the Shares as of December 31, 2018:

Equity Compensation Plan	Maximum number of securities issuable under the plan ⁽¹⁾	Total number of securities awarded and outstanding under the plan	Total number of securities available for grant under the plan
Stock Option Plan and SIP	Number	6,678,316	2,191,211
	Percentage of outstanding Shares ⁽²⁾	17.5%	5.7%

(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 SIP are represented together.

(2) As of December 31, 2018, there were 38,161,808 Shares issued and outstanding.

Annual Burn Rate

The following table provides the annual burn rate associated with the Share Option Plan and the 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	2018	2,319,500	33,391,815	6.95%
	2017	826,500	22,313,364	3.70%
	2016	381,900	12,742,614	3.00%
SIP	2018	150,000	33,391,815	0.45%
	2017	150,000	22,313,364	0.67%
	2016 ⁽⁵⁾	Nil	Nil	Nil

(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.

(4) The SIP was adopted by the Board on May 5, 2015 and approved by the Shareholders on June 10, 2015.

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, 2018, 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.

2020 SHAREHOLDER PROPOSALS

Shareholder proposals intended to be presented in our proxy materials relating to our 2020 annual meeting of Shareholders must be received by us on or before January 9, 2020 unless the date of the meeting is changed by more than 30 calendar days from the date of the annual meeting of Shareholders for fiscal 2020, and must satisfy the requirements of the proxy rules promulgated by the SEC. 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 \$2,000 in market value, or 1%, 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 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 9, 2020.

For any other Shareholder proposals to be presented at our next annual meeting of Shareholders, Rule 14a-4(c) under the Exchange Act provides that if a proponent of a proposal fails to notify us at the address below at least 45 days prior to the first anniversary of the date of first mailing of the prior year’s proxy statement (or any date specified in an advance notice provision), then the brokers or nominees will be allowed to use their discretionary voting authority with respect to the voting of proxies when the proposal is presented at the meeting, without any discussion of the matter in the proxy statement. With respect to our 2020 Annual Meeting of Shareholders, if we are not provided notice of a Shareholder proposal, which the Shareholder has not previously sought to include in our proxy statement, by January 9, 2020, the brokers or nominees will be allowed to use their discretionary authority with respect to the voting of proxies.

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 Financial Officer 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, 2018 or from January 1, 2019 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 \$20,000,000. For the period January 1, 2018 to December 31, 2018, the premium cost of this insurance was \$317,794.

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, 2018, 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, 2018 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 Secretary of Aptose, free of charge to our securityholders. Our financial information is provided in our consolidated financial statements for the year ended December 31, 2018 and management’s discussion and analysis of our financial condition and results of operations for the year ended December 31, 2018.

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

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.

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SAM SAMPLE
123 SAMPLES STREET
SAMPLETOWN SS X9X X9X
CANADA

Security Class
COMMON SHARES

Holder Account Number
C9999999999 IND



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Form of Proxy - Annual and Special Meeting to be held on June 4, 2019

This Form of Proxy is solicited by and on behalf of Management.

Notes to proxy

1. Every holder has the right to appoint some other person or company of their choice, who need not be a holder, to attend and act on their behalf at the meeting or any adjournment or postponement thereof. If you wish to appoint a person or company other than the persons whose names are printed herein, please insert the name of your chosen proxyholder in the space provided (see reverse).
2. If the securities are registered in the name of more than one owner (for example, joint ownership, trustees, executors, etc.), then all those registered should sign this proxy. If you are voting on behalf of a corporation or another individual you must sign this proxy with signing capacity stated, and you may be required to provide documentation evidencing your power to sign this proxy.
3. This proxy should be signed in the exact manner as the name(s) appear(s) on the proxy.
4. If this proxy is not dated, it will be deemed to bear the date on which it is mailed by Management to the holder.
5. **The securities represented by this proxy will be voted as directed by the holder, however, if such a direction is not made in respect of any matter, this proxy will be voted as recommended by Management.**
6. The securities represented by this proxy will be voted in favour or withheld from voting or voted against each of the matters described herein, as applicable, in accordance with the instructions of the holder, on any ballot that may be called for and, if the holder has specified a choice with respect to any matter to be acted on, the securities will be voted accordingly.
7. This proxy confers discretionary authority in respect of amendments or variations to matters identified in the Notice of Meeting or other matters that may properly come before the meeting or any adjournment or postponement thereof.
8. This proxy should be read in conjunction with the accompanying documentation provided by Management.

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Proxies submitted must be received by 5:00 pm, Eastern Daylight Time, on May 31, 2019.

VOTE USING THE TELEPHONE OR INTERNET 24 HOURS A DAY 7 DAYS A WEEK!



To Vote Using the Telephone

- Call the number listed BELOW from a touch tone telephone.

1-866-732-VOTE (8683) Toll Free



To Vote Using the Internet

- Go to the following web site:
www.investorvote.com
- **Smartphone?**
Scan the QR code to vote now.



To Receive Documents Electronically

- You can enroll to receive future securityholder communications electronically by visiting www.investorcentre.com and clicking at the bottom of the page.

If you vote by telephone or the Internet, DO NOT mail back this proxy.

Voting by mail may be the only method for securities held in the name of a corporation or securities being voted on behalf of another individual.

Voting by mail or by Internet are the only methods by which a holder may appoint a person as proxyholder other than the Management nominees named on the reverse of this proxy. Instead of mailing this proxy, you may choose one of the two voting methods outlined above to vote this proxy.

To vote by telephone or the Internet, you will need to provide your CONTROL NUMBER listed below.

CONTROL NUMBER 23456 78901 23456

LORQ_PRX_292139/000001/000001/i

+ SAM SAMPLE

C999999999



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IND C04

Appointment of Proxyholder

I/We, being holder(s) of Aptose Biosciences Inc. hereby appoint: William G. Rice or, failing this person, Gregory K. Chow

OR

Print the name of the person you are appointing if this person is someone other than the Management Nominees listed herein.

as my/our proxyholder with full power of substitution and to attend, act and to vote for and on behalf of the shareholder in accordance with the following direction (or if no directions have been given, as the proxyholder sees fit) and all other matters that may properly come before the Annual and Special Meeting of shareholders of Aptose Biosciences Inc. (the "Corporation") to be held at the InterContinental Hotel, 901 Bayfront Court, San Diego, California, on June 4, 2019 at 10:00 am, Pacific Daylight Time, and at any adjournment or postponement thereof.

VOTING RECOMMENDATIONS ARE INDICATED BY HIGHLIGHTED TEXT OVER THE BOXES.

1. Election of Directors

	For	Withhold		For	Withhold		For	Withhold
01. Carol Ashe	<input type="checkbox"/>	<input type="checkbox"/>	02. Dr. Denis Burger	<input type="checkbox"/>	<input type="checkbox"/>	03. Caroline Loewy	<input type="checkbox"/>	<input type="checkbox"/>
04. Dr. Eric Platzer	<input type="checkbox"/>	<input type="checkbox"/>	05. Dr. William G. Rice	<input type="checkbox"/>	<input type="checkbox"/>	06. Dr. Mark D. Vincent	<input type="checkbox"/>	<input type="checkbox"/>
07. Warren Whitehead	<input type="checkbox"/>	<input type="checkbox"/>						

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2. Appointment of Auditor

Appointment of KPMG, LLP as the independent accounting firm for the Corporation.

For	Against	Abstain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Ratification of Amendment to By-laws

Ratification of amendment to the Corporation's by-laws to increase the quorum for any meeting of shareholders.

For	Against	Abstain
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fold

Authorized Signature(s) - This section must be completed for your instructions to be executed.

I/We authorize you to act in accordance with my/our instructions set out above. I/We hereby revoke any proxy previously given with respect to the Meeting. If no voting instructions are indicated above, this Proxy will be voted as recommended by Management.

Signature(s)

Date

DD / MM / YY

Interim Financial Statements - Mark this box if you would like to receive Interim Financial Statements and accompanying Management's Discussion and Analysis by mail.

Annual Financial Statements - Mark this box if you would NOT like to receive the Annual Financial Statements and accompanying Management's Discussion and Analysis by mail.

If you are not mailing back your proxy, you may register online to receive the above financial report(s) by mail at www.computershare.com/maillinglist.

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