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

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

APTOSE BIOSCIENCES INC.

(Exact Name of Registrant As Specified In Its Charter)

Canada
(State or other jurisdiction of
incorporation or organization)

2836
(Primary Standard Industrial
Classification Code Number)

98-1136802
(I.R.S. Employer
Identification Number)

251 Consumers Road, Suite 1105
Toronto, Ontario, Canada M2J 4R3
(647) 479-9828

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Aptose Biosciences U.S. Inc.
Unit 120, 12770 High Bluff Drive
San Diego, California 92130
(858) 926-2730

(Name, address, including zip code, and telephone number, including area code, of agent for service)

COPIES TO:

Daniel M. Miller
Dorsey & Whitney LLP
Suite 1070, 1095 West Pender
Street
Vancouver, British Columbia
Canada V6E 2M6

Fletcher Payne
Senior Vice President and
Chief Financial Officer
Aptose Biosciences Inc.
251 Consumers Road, Suite 1105
Toronto, Ontario
Canada M2J 4R3
(647) 479-9828

Ivan K. Blumenthal
Mintz, Levin, Cohn, Ferris,
Glovsky and Popeo, P.C.
919 Third Avenue
New York, NY 10022
(212) 692-6750

From time to time after the effective date of this Registration Statement
(Approximate date of commencement of proposed sale to the public)

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, please check the following box.

If this Form is used to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the Company is a large accelerated filer, an accelerated filer, anon-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the Company has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The Company hereby amends this registration statement on such date or date(s) as may be necessary to delay its effective date until the Company shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, or until the registration statement shall become effective on such date as the Commission acting pursuant to said Section 8(a) may determine.

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission of which this prospectus is a part becomes effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, Dated December 1, 2023

PRELIMINARY PROSPECTUS



4,098,361 Common Shares

Pre-Funded Warrants to Purchase up to 4,098,361 Common Shares

Warrants to Purchase 4,098,361 Common Shares

We are offering 4,098,361 common shares, no par value (“Offered Shares”), together with Pre-Funded Warrants and/or Warrants to purchase Offered Shares (“Warrants”). Offered Shares and Warrants will be sold in combination, with one Warrant exercisable for one Offered Share. Our common shares are listed on the Nasdaq Capital Market (“Nasdaq”) under the symbol “APTO” and on the Toronto Stock Exchange (“TSX”) under the symbol “APS”. On November 30, 2023, the last reported sale price of the common shares on Nasdaq was \$2.44 per common share and on the TSX was C\$3.32 per common share. The assumed combined public offering price for each Offered Share and accompanying Warrant is \$2.44, which is the last reported sale price of our common shares on Nasdaq on November 30, 2023. We have applied to the TSX for conditional approval of the offering and are relying on the exemption included in section 602.1 of the TSX Company Manual. The completion of the offering is conditional upon the approval of the TSX.

Each Warrant has an assumed exercise price of \$2.44 per Offered Share, which is the last reported sale price of our common shares on Nasdaq on November 30, 2023, will be exercisable immediately upon issuance, subject to certain limitations based on the holder’s beneficial ownership of our common shares, and will expire five years from the date of issuance. The Offered Shares and Warrants are immediately separable and will be issued separately in this offering, but must be purchased together in this offering. We are also offering Pre-Funded Warrants to purchase up to 4,098,361 Offered Shares to those purchasers whose purchase of Offered Shares in this offering would result in the purchaser beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common shares following the consummation of this offering in lieu of the Offered Shares that would result in ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%) following the consummation of this offering. Each Pre-Funded Warrant will be exercisable for one Offered Share at an exercise price of \$0.01 per Offered Share. Each Pre-Funded Warrant is being issued together with the same Warrants described above being issued with each Offered Share. The assumed combined public offering price for each such Pre-Funded Warrant, together with the Warrants, is \$2.43, which is equal to the assumed public offering price in this offering of an Offered Share and accompanying Warrant less the \$0.01 per Offered Share exercise price of each such Pre-Funded Warrant. Each Pre-Funded Warrant will be exercisable immediately upon issuance, subject to certain limitations based on the holder’s beneficial ownership of our common shares, and may be exercised at any time until the Pre-Funded Warrant is exercised in full. The Pre-Funded Warrants and Warrants are immediately separable and will be issued separately in this offering, but must be purchased together in this offering. For each Pre-Funded Warrant and the accompanying Warrants we sell, the number of Offered Shares and the accompanying Warrants we are offering will be decreased on a one-for-one basis.

We are also registering the Offered Shares issuable upon exercise of the Pre-Funded Warrants and Warrants.

There is no established public trading market for the Pre-Funded Warrants and Warrants, and we do not expect a market to develop. We do not intend to apply for listing of the Pre-Funded Warrants or Warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Pre-Funded Warrants and Warrants will be limited.

Investing in our Offered Shares, Pre-Funded Warrants and Warrants involves a high degree of risk. Review “Risk Factors” beginning on page 11 of this prospectus carefully before you make an investment in our securities. You should read this prospectus, together with additional information described under the headings “Incorporation of Certain Information by Reference” and “Where You Can Find More Information,” carefully before investing in any of our Offered Shares, Pre-Funded Warrants and Warrants.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Offered Share and Warrant	Per Pre-Funded Warrant and Warrant	Total
Public offering price			
Underwriting discounts and commissions ⁽¹⁾			
Proceeds, before expenses, to us ⁽²⁾			

(1) See “Underwriting” beginning on page 16 for additional information regarding underwriting compensation.

(2) The amount of proceeds, before expenses, to us does not give effect to any exercise of the Pre-Funded Warrants or Warrants.

The underwriters expect to deliver the Offered Shares, Pre-Funded Warrants and Warrants on or about _____, 2023.

Sole Book-Running Manager

Oppenheimer & Co.

The date of this prospectus is , 2023

TABLE OF CONTENTS

	Page No.
ABOUT THIS PROSPECTUS	i
CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS	i
ENFORCEABILITY OF CIVIL LIABILITIES	iv
PROSPECTUS SUMMARY	5
THE OFFERING	9
RISK FACTORS	11
USE OF PROCEEDS	13
DILUTION	14
UNDERWRITING	16
CERTAIN MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS	21
DESCRIPTION OF OUR COMMON SHARES	33
DESCRIPTION OF OUR SECURITIES WE ARE OFFERING	34
DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES	38
LEGAL MATTERS	38
EXPERTS	38
WHERE YOU CAN FIND MORE INFORMATION	38
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	38

ABOUT THIS PROSPECTUS

This prospectus, including the information incorporated by reference, is part of a registration statement that we have filed with the Securities and Exchange Commission (the “SEC”). You should not assume that the information contained in this prospectus is accurate on any date subsequent to the date set forth on the front cover of this prospectus or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or securities are sold or otherwise disposed of on a later date. It is important for you to read and consider all information contained in this prospectus, including the Information Incorporated by Reference herein, in making your investment decision. You should also read and consider the information in the documents to which we have referred you under the captions “Where You Can Find More Information” and “Incorporation of Certain Information by Reference” in this prospectus.

Neither we nor the underwriters have authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus. This prospectus does not constitute an offer to sell or the solicitation of an offer to buy any of our securities other than the securities covered hereby, nor does this prospectus constitute an offer to sell or the solicitation of an offer to buy any securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. Persons who come into possession of this prospectus in jurisdictions outside the United States are required to inform themselves about, and to observe, any restrictions as to the offering and the distribution of this prospectus applicable to those jurisdictions.

We further note that the representations, warranties and covenants made in any agreement that is filed as an exhibit to any document that is incorporated by reference in the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

The information in this prospectus is accurate as of the date on the front cover. Information incorporated by reference into this prospectus is accurate as of the date of the document from which the information is incorporated. You should not assume that the information contained in this prospectus is accurate as of any other date.

As used in this prospectus and in any prospectus supplement, unless the context otherwise requires, the terms “Aptose,” the “Company,” “we,” “us,” and “our” refer to Aptose Biosciences Inc. and, unless the context requires otherwise, the subsidiaries through which it conducts business.

In order to maintain its listing on Nasdaq, the Company effected a reverse stock split on a fifteen (15) to one (1) share basis, and common shares commenced trading on a post-reverse stock split basis at market open on Tuesday, June 6, 2023. All share and per common share amounts in this prospectus have been adjusted retroactively to reflect the reverse stock split as if it had occurred at the beginning of the earliest period presented.

Unless stated otherwise or if the context otherwise requires, all references to dollar amounts in this prospectus are references to U.S. dollars.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference herein, contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and “forward-looking information” within the meaning of applicable Canadian securities law. We refer to such forward-looking statements and forward-looking information collectively as “forward-looking statements”. These statements relate to future events or future performance and reflect our expectations and assumptions regarding our growth, results of operations, performance and business prospects and opportunities. Such forward-looking statements reflect our current beliefs and are based on information currently available to us. In some cases, forward-looking statements can be identified by terminology such as “may”, “would”, “could”, “will”, “should”, “expect”, “plan”, “intend”, “anticipate”, “believe”, “estimate”, “predict”, “potential”, “continue” or the negative of these terms or other similar expressions concerning matters that are not historical facts.

Table of Contents

The forward-looking statements contained in this prospectus and in the documents incorporated by reference reflect our current views with respect to future events, are subject to significant risks and uncertainties, and are based upon a number of estimates and assumptions that, while considered reasonable by us, are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause our actual results, performance or achievements to be materially different from any future results, performance, or achievements that may be expressed or implied by such forward-looking statements, including, among others:

- our ability to continue as a going concern;
- our lack of product revenues;
- our early stage of development, particularly the inherent risks and uncertainties associated with (i) developing new drug candidates generally, (ii) demonstrating the safety and efficacy of these drug candidates in clinical studies in humans, and (iii) obtaining regulatory approval to commercialize these drug candidates;
- our need to raise substantial additional capital in the future and that we may be unable to raise such funds when needed and on acceptable terms;
- further equity financing, which may substantially dilute the interests of our existing shareholders;
- clinical studies and regulatory approvals of our drug candidates are subject to delays, and may not be completed or granted on expected timetables, if at all, and such delays may increase our costs and could substantially harm our business;
- our reliance on external contract research/manufacturing organizations for certain activities and if we are subject to quality, cost, or delivery issues with the preclinical and clinical grade materials supplied by contract manufacturers, our business operations could suffer significant harm;
- clinical studies are long, expensive and uncertain processes and the United States Food and Drug Administration, or “FDA”, or other similar foreign regulatory agencies that we are required to report to, may ultimately not approve any of our product candidates;
- our ability to comply with applicable regulations and standards;
- our inability to achieve our projected development goals in the time frames we announce and expect;
- difficulties in enrolling patients for clinical trials may lead to delays or cancellations of our clinical trials;
- our reliance on third parties to conduct and monitor our preclinical studies;
- our ability to attract and retain key personnel, including key executives and scientists;
- any misconduct or improper activities by our employees;
- our exposure to exchange rate risk;
- our ability to commercialize our business attributed to negative results from clinical trials;
- the marketplace may not accept our products or product candidates due to the intense competition and technological change in the biotechnical and pharmaceuticals, and we may not be able to compete successfully against other companies in our industries and achieve profitability;
- our ability to obtain and maintain patent protection;
- our ability to afford substantial costs incurred with defending our intellectual property;
- our ability to protect our intellectual property rights and not infringe on the intellectual property rights of others;
- our business is subject to potential product liability and other claims;
- potential exposure to legal actions and potential need to take action against other entities;
- commercialization limitations imposed by intellectual property rights owned or controlled by third parties;
- our ability to maintain adequate insurance at acceptable costs;
- our ability to find and enter into agreements with potential partners;
- extensive government regulation;
- data security incidents and privacy breaches could result in increased costs and reputational harm;
- our common share price has been and is likely to continue to be volatile;
- future sales of our common shares by us or by our existing shareholders could cause our common share price to drop;

Table of Contents

- changing global market and financial conditions;
- changes in an active trading market in our common shares;
- difficulties by non-Canadian investors to obtain and enforce judgments against us because of our Canadian incorporation and presence;
- potential adverse U.S. federal tax consequences for U.S. shareholders because we are a “passive foreign investment company”;
- our “smaller reporting company” status;
- any failures to maintain an effective system of internal controls may result in material misstatements of our financial statements, or cause us to fail to meet our reporting obligations or fail to prevent fraud;
- our broad discretion in how we use the proceeds of the sale of Offered Shares, Pre-Funded Warrants and Warrants;
- our ability to expand our business through the acquisition of companies or businesses; and
- other risks detailed from time-to-time in our on-going filings with the SEC and Canadian securities regulators, and those which are discussed under the heading “Risk Factors” in this prospectus and in the documents incorporated by reference.

Should one or more of these risks or uncertainties materialize, or should the assumptions described in the sections entitled “Risk Factors” in this prospectus and in the documents incorporated by reference underlying those forward-looking statements prove incorrect, actual results may vary materially from those described in the forward-looking statements.

More detailed information about these and other factors is included in this prospectus under the section entitled “Risk Factors” and in the documents incorporated by reference into this prospectus. Although we have attempted to identify factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Forward-looking statements are based upon our beliefs, estimates and opinions at the time they are made and we undertake no obligation to update forward-looking statements if these beliefs, estimates and opinions or circumstances should change, except as required by applicable law. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

Forward-looking statements contained in this prospectus are made as of the date of this prospectus. Forward-looking statements made in a document incorporated by reference into this prospectus are made as of the date of the original document and have not been updated by us except as expressly provided for in this prospectus.

Except as required under applicable securities legislation, we undertake no obligation to publicly update or revise forward-looking statements, whether as a result of new information, future events or otherwise. **We qualify all the forward-looking statements contained in this prospectus and the documents incorporated by reference in this prospectus by the foregoing cautionary statements.**

ENFORCEABILITY OF CIVIL LIABILITIES

We are incorporated under the laws of Canada. Many of our directors and officers and the experts named in this prospectus are residents of countries other than the United States, and all or a substantial portion of their assets and some of our assets are located outside the United States. We have appointed Aptose Biosciences U.S. Inc. as our agent for service of process in the United States, but it may be difficult for holders of securities who reside in the United States to effect service within the United States upon those directors, officers and experts who are not residents of the United States. Additionally, it may not be possible for you to enforce judgments obtained in U.S. courts based upon the civil liability provisions of the U.S. federal securities laws or other laws of the United States. In addition, there is doubt as to whether an original action could be brought in Canada against us or our directors or officers based solely upon U.S. federal or state securities laws and as to the enforceability in Canadian courts of judgments of U.S. courts obtained in actions based upon the civil liability provisions of U.S. federal or state securities laws.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus or incorporated by reference. It may not contain all of the information that you should consider before investing in our securities. You should read this entire prospectus carefully, including the "Risk Factors", "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections, and the financial statements and related notes included or incorporated by reference herein. This prospectus includes forward-looking statements that involve risks and uncertainties. See "Cautionary Statement Regarding Forward-Looking Statements."

Aptose Biosciences Inc.

Company Overview

We are a science-driven biotechnology company advancing targeted agents to treat life-threatening cancers, such as acute myeloid leukemia ("AML"), high-risk myelodysplastic syndromes ("MDS"), and other hematologic malignancies. Based on insights into the genetic and epigenetic profiles of certain cancers and patient populations, We are building a pipeline of novel oncology therapies directed at dysregulated processes and signaling pathways. We are developing targeted medicines for precision treatment of these diseases to optimize efficacy and quality of life by minimizing the side effects associated with conventional therapies. We currently have in development two molecules: tuspetinib (HM43239) and luxepetinib (CG-806), both being evaluated for safety, tolerability, pharmacokinetics, and signals of efficacy in Phase 1 clinical trials. Each molecule is described below.

Tuspetinib is a once daily oral potent myeloid kinase inhibitor, targeting a constellation of kinases operative in myeloid malignancies and known to be involved in tumor proliferation, resistance to therapy, and differentiation but avoiding kinases that typically cause toxicities associated with other kinase inhibitors. Tuspetinib has completed the dose escalation and dose exploration stages of an international Phase 1/2 clinical trial designed to assess the safety, tolerability, pharmacokinetics, pharmacodynamic responses, and efficacy of tuspetinib as a single agent in patients with relapsed or refractory AML ("R/R AML"). Complete remissions ("CRs") without dose limiting toxicities ("DLT") were achieved at four dose levels across a broad diversity of mutationally-defined AML populations and with a favorable safety profile. Moreover, tuspetinib to date has caused no QTc prolongations or differentiation syndrome in treated patients and has caused no myelosuppression with continuous dosing of patients in remission. These findings led to advancement of tuspetinib into the APTIVATE expansion trial of the Phase 1/2 program to collect responses in R/R AML patient populations enriched with specific genotypic and phenotypic backgrounds when treated with single agent tuspetinib or when combined with the venetoclax BCL-2 inhibitor, with the intent to guide selection of mutationally-defined AML populations for single agent Phase 2 Accelerated Approval Trial(s) and to position tuspetinib for dual and triple combination studies in later and early lines of therapy. Based on the safety and efficacy profile of tuspetinib, we believe that tuspetinib, if approved, can reach greater than \$3 billion in annual sales by 2035 because we believe tuspetinib could (1) become the preferred kinase inhibitor for inclusion in triplet combination for front line AML patients with FLT3 mutations and for patients with wild type FLT3, (2) become the preferred kinase inhibitor for inclusion in doublet combination with venetoclax for second line R/R AML patients, (3) serve as an effective agent for maintenance therapy to prevent relapse in patients who achieved a CR through a stem cell transplant or through drug-based therapy, and 4) serve as an effective agent for the treatment of third line FLT3 mutated patients failed by prior therapy with other FLT3 inhibitors. In addition, we plan to test tuspetinib for efficacy and safety in patients with MDS, and, if found active and safe in this population, could support the overall market potential of tuspetinib at \$3 billion sales annually. However, our belief is based on management's current assumptions and estimates, which are subject to change, and there can be no assurance that tuspetinib will ever be approved or successfully commercialized and, if approved and commercialized, that it will ever generate significant revenues. See our "Risk Factors – *We are an early stage development company with no revenues from product sales.*" and *"We have a history of operating losses. We expect to incur net losses and we may never achieve or maintain profitability."* in our Annual Report on Form 10-K for the year ended December 31, 2022.

Luxepetinib is a novel, oral, highly potent lymphoid and myeloid kinase inhibitor that selectively targets defined clusters of kinases operative in myeloid and lymphoid hematologic malignancies. This small molecule anticancer agent has been evaluated in a Phase 1a/b study for the treatment of patients having B-cell leukemias and lymphomas that are resistant/refractory/intolerant to other therapies. Under a separate Investigational New Drug, luxepetinib has been evaluated in a Phase 1a/b study for the treatment of patients with R/R AML or high risk MDS.

These studies with the original formulation demonstrated tumor shrinkage among B-cell cancer patients, including a very recent report of a CR in a diffuse large B-cell lymphoma patient that was determined via biopsy analysis at the end of Cycle 22 with 900mg two times a day (“BID”) dosing of the original G1 formulation. Likewise, a CR in one R/R AML patient occurred with 450mg BID dosing of the original G1 formulation. While these CRs were important, poor absorption of the original G1 formulation hampered the effectiveness of luxetpinib. To address the limited absorption of the G1 formulation, a new G3 formulation was developed and demonstrated improved absorption properties. The new G3 formulation is now being tested under conditions of twice daily continuous oral dosing in R/R AML patients. It is hoped the G3 formulation of luxetpinib can serve patients across lymphoid and myeloid malignancies and combine well with other agents to extend its application to multiple lines of therapy.

Corporate Information

We were incorporated under the *Business Corporations Act* (Ontario) on September 5, 1986 under the name RML Medical Laboratories Inc. On October 28, 1991, we amalgamated with Mint Gold Resources Ltd., which caused us to become a reporting issuer in Ontario. On August 25, 1992, we changed our name to IMUTEC Corporation. On November 27, 1996, we changed our name to Imutec Pharma Inc., and on November 19, 1998, we changed our name to Lorus Therapeutics Inc. On October 1, 2005, we continued under the *Canada Business Corporations Act* and on July 10, 2007 we completed a plan of arrangement and corporate reorganization with, among others, 6650309 Canada Inc., 6707157 Canada Inc. and Pinnacle International Lands, Inc. On May 25, 2010, we consolidated our outstanding common shares on the basis of one post-consolidation common share for each 30 pre-consolidation common shares.

On August 28, 2014 we changed our name from Lorus Therapeutics Inc. to Aptose Biosciences Inc. and on October 1, 2014 we consolidated our outstanding common shares on the basis of one (1) post-consolidation common share for each twelve (12) pre-consolidation common shares. On May 24, 2023, we consolidated our outstanding common shares on the basis of one (1) post-consolidation common share for each fifteen (15) pre-consolidation common shares.

We have two subsidiaries: Aptose Biosciences U.S. Inc., a corporation incorporated under the laws of Delaware; and NuChem Pharmaceuticals Inc., a corporation incorporated under the laws of Ontario, Canada. We own 100% of the issued and outstanding voting share capital of Aptose Biosciences U.S. Inc., and 80% of the issued and outstanding voting share capital of NuChem Pharmaceuticals Inc.

Our head, registered and records office is located at 251 Consumers Road, Suite 1105, Toronto, Ontario, Canada, M2J 4R3. Our executive office is located at 12770 High Bluff Drive, Suite 120, San Diego, CA 92130. We maintain a website at www.aptose.com. Information contained on our website is not part of this prospectus.

Recent Developments

Clinical Update

We previously announced an up-to-date review of clinical data for Aptose’s two investigational products for hematologic malignancies: tuspetinib and luxetpinib.

Tuspetinib (HM43239)

- Completed tuspetinib dose escalation and dose exploration Phase 1/2 trial in 91 R/R AML patients:
 - Tuspetinib demonstrated a favorable safety profile.
 - Tuspetinib delivered monotherapy responses across four dose levels with no DLT in mutationally diverse and difficult to treat R/R AML populations, including TP53-mutated patients with a CR or CR with partial hematologic recovery (“CR/CRh”) of 20% and RAS-mutated patients with a CR/CRh of 22%.
 - TUS single agent at RP2D 80mg is highly active in VEN-naïve R/R AML patients
 - 42% CR/CRh Overall | 60% CR/CRh in FLT3^{MUT} | 29% CR/CRh in FLT3^{WT}
 - TUS single agent is active in patients with unmutated (wildtype, WT) FLT3.
 - Patients enrolled at higher dose levels above 80mg represented a different population – primarily VEN failures – more difficult-to-treat and with lower response rates to therapies.
 - Response rates above the 80mg dose level were lower due the different patient population.

- Completed successful End of Phase 1 Meeting with the United States Food and Drug Administration for tuspetinib, and a monotherapy RP2D was selected as 80mg daily, and all development paths remain open, including the single arm accelerated path.
- Initiated tuspetinib APTIVATE expansion trial with R/R AML patients:
 - TUS directly targets many of the pathways involved in venetoclax (VEN) resistance, and TUS may re-sensitize prior-VEN failure patients to VEN
 - TUS is being administered as a combination doublet with TUS/VEN, and enrollment has been brisk
 - Data for patients treated with the TUS/VEN doublet are available from a data cut effective 23 October 2023 with conclusions below drawn from this data cut
 - TUS/VEN doublet has been well tolerated, with no new safety signals emerging
 - TUS/VEN is highly active in emerging VEN failure AML population
 - ORR = 44%, 56% and 38% in VEN failure patients from Overall, FLT3^{MUT} and FLT3^{WT} R/R AML populations, respectively
 - CRc = 24%, 33% and 19% in VEN failure patients from Overall, FLT3^{MUT} and FLT3^{WT} R/R AML populations, respectively
 - TUS/VEN doublet may be positioned for an accelerated approval path in R/R AML
 - TUS/VEN doublet has the potential to be the first-to-market in R/R Prior-VEN failure setting
 - TUS is planned to be studied as part of a TUS/VEN/HMA triplet in 1L newly diagnosed AML patients unfit for chemotherapy with or without FLT3 mutations

Luxepetinib (CG-806)

- 50mg G3 formulation with continuous dosing achieves roughly equivalent pharmacokinetic profile as 900mg original G1 formulation; and
- Continuous dosing of a new G3 formulation has commenced in R/R AML patients and PK data are being collected to determine if the new formulation delivers improved plasma exposures

Intellectual Property

We believe that our issued patents and pending applications are important in establishing and maintaining a competitive position with respect to our products and technology.

Tuspetinib (HM43239)

In November 2021, we licensed the exclusive rights to research, develop and commercialize HM43229. Under the terms of the agreement, Hanmi Pharmaceutical Co., Ltd. (“Hanmi”) has granted us exclusive worldwide rights to HM43239 for all indications. We are now the exclusive licensee of composition of matter and use patents covering HM43229, and HM43239 analogs. We believe that we now own rights to a strong and defensive intellectual property position.

As of December 1, 2023, we own rights in 43 issued patents, including 4 issued U.S. patents, and 23 patents validated in countries in Europe, that are in force and cover the HM43239 compound, or analog compounds. These patents are expected to provide protection until 2038 through 2039. Patent applications are also pending in the United States and in contracting states to the Patent Cooperation Treaty for coverage of HM43239 and analog compounds, with expected expiry dates between 2038 and 2042.

Luxepetinib (CG-806)

In May 2018 and June 2018, we licensed from Crystal Genomics, Inc. (“CG”) an exclusive license to research, develop and commercialize luxepetinib in all countries of the world except the Republic of Korea and China, for all fields of use (collectively, the “Rights”) to luxepetinib, by exercising an option we obtained through a June 2016 option-license agreement with CG that had granted us an exclusive option to research, develop and commercialize luxepetinib. In June 2018, we entered into a separate license agreement with CG for us to gain a license for rights to luxepetinib in China (including the People’s Republic of China, Hong Kong, and Macau) (the “China Rights”). We now own worldwide Rights to luxepetinib, including an issued patent in China but excluding any Rights in Korea.

[Table of Contents](#)

As of December 1, 2023, we owned rights to 49 issued patents, including 3 issued U.S. patents, and 30 patents validated in countries in Europe, that are in force and cover numerous compounds, including the CG-806 compound, pharmaceutical compositions comprising the CG-806 compound, and methods of use for treating various diseases by administering various compounds, including the CG-806 compound. These patents are expected to provide protection until 2033-2038. Patent applications are also pending in the United States and in contracting states to the Patent Cooperation Treaty for coverage of CG-806, with expected expiry dates between 2038-2039.

THE OFFERING

Securities offered by us	4,098,361 Offered Shares Warrants to purchase 4,098,361 Offered Shares Pre-Funded Warrants to purchase up to 4,098,361 Offered Shares
Description of securities	Each Warrant has an assumed exercise price of \$2.44 per Offered Share, which is the last reported sale price of our common shares on Nasdaq on November 30, 2023, will be exercisable immediately upon issuance, subject to certain limitations based on the holder’s beneficial ownership of our common shares, and will expire five years from the date of issuance. The Offered Shares and Warrants are immediately separable and will be issued separately in this offering, but must be purchased together in this offering. We are also offering Pre-Funded Warrants to purchase up to 4,098,361 Offered Shares to those purchasers whose purchase of Offered Shares in this offering would result in the purchaser beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common shares following the consummation of this offering in lieu of the Offered Shares that would result in ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%) following the consummation of this offering. Each Pre-Funded Warrant will be exercisable for one Offered Share at an exercise price of \$0.01 per Offered Share. Each Pre-Funded Warrant is being issued together with the same Warrants described above being issued with each Offered Share. The assumed combined public offering price for each such Pre-Funded Warrant, together with the Warrants, is \$2.43, which is equal to the assumed public offering price in this offering of an Offered Share and accompanying Warrant less the \$0.01 per Offered Share exercise price of each such Pre-Funded Warrant. Each Pre-Funded Warrant will be exercisable immediately upon issuance, subject to certain limitations based on the holder’s beneficial ownership of our common shares, and may be exercised at any time until the Pre-Funded Warrant is exercised in full. The Pre-Funded Warrants and Warrants are immediately separable and will be issued separately in this offering, but must be purchased together in this offering. For each Pre-Funded Warrant and the accompanying Warrants we sell, the number of Offered Shares and the accompanying Warrants we are offering will be decreased on a one-for-one basis. See “Description of Our Securities We Are Offering”.
Common shares outstanding prior to this offering	7,942,363 common shares
Common shares outstanding immediately after this offering	12,040,724 common shares (assuming none of the Warrants or Pre-Funded Warrants issued in this offering are exercised)
Stock symbol	Our common shares are listed on Nasdaq under the symbol “APTO” and on the TSX under the symbol “APS”.

[Table of Contents](#)

Use of proceeds	<p>We estimate the net proceeds from this offering will be approximately \$9.1 million (assuming none of the Pre-Funded Warrants or Warrants issued in this offering are exercised), after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.</p> <p>We intend to use any proceeds from this offering that we receive for working capital and general corporate purposes. See “Use of Proceeds” on page 13 for more information.</p>
Risk factors	<p>Investing in our securities involves a high degree of risk. As an investor you should be prepared to lose your entire investment. See “Risk Factors” beginning on page 11.</p>
Transfer agent	<p>Computershare Investor Service</p>
¹	<p>The number of common shares to be outstanding prior to and after this offering is based on 7,942,363 common shares outstanding as of November 30, 2023 and excludes:</p> <ul style="list-style-type: none">• 1,188,289 stock options outstanding as of November 30, 2023, at a weighted average exercise price of \$44.73 per common share; and• 976,500 common shares that have been reserved for issuance in connection with future grants under our security-based compensation plans.

Unless otherwise indicated, all information contained in this prospectus assumes: (i) no exercise of the outstanding options or warrants described above; and (ii) no sale of Pre-Funded Warrants in this offering and no exercise of the Warrants in this offering.

RISK FACTORS

You should carefully consider the following risk factors in addition to other information in this prospectus before purchasing our Offered Shares. The risks and uncertainties described below are those that we currently deem to be material and that we believe are specific to our company, our industry and this offering. These risks and uncertainties are not the only ones facing us. Additional risks of which we are not presently aware or that we currently believe are immaterial may also harm our business and results of operations. The trading price of our common shares could decline due to the occurrence of any of these risks, and investors could lose all or part of their investment.

In evaluating the Company, its business and any investment in the Company, readers should carefully consider the following factors, together with the additional risk factors incorporated by reference from Item 1A of the Company's Annual Report on Form 10-K as filed with the SEC on March 24, 2023 (see "Incorporation of Certain Information by Reference").

Risks Related to this Offering

A substantial number of common shares may be sold in the market following this offering, which may depress the market price for our Offered Shares, Pre-Funded Warrants and Warrants.

Sales of a substantial number of our common shares in the public market following this offering could cause the market price of our common shares to decline. A substantial majority of the outstanding common shares are, and the Offered Shares offered hereby or issuable upon exercise of the Pre-Funded Warrants and Warrants offered hereby will be, freely tradable without restriction or further registration under the Securities Act. Because the Pre-Funded Warrants and Warrants are exercisable into our Offered Shares, volatility or a reduction in the market price of our common shares could have an adverse effect on the market price of the Pre-Funded Warrants and Warrants.

There is no public market for the Pre-Funded Warrants and Warrants being offered in this offering.

There is no established public trading market for the Pre-Funded Warrants and Warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the Pre-Funded Warrants and Warrants on any national securities exchange or other nationally recognized trading system, including Nasdaq or the TSX. Without an active market, the liquidity of the Pre-Funded Warrants and Warrants will be extremely limited.

Holders of our Pre-Funded Warrants and Warrants will have no rights as a holder of our common shares until they acquire our common shares.

Until you acquire our common shares upon exercise of the Pre-Funded Warrants or Warrants, you will have no rights with respect to our common shares issuable upon exercise of the Pre-Funded Warrants or Warrants. Upon exercise of your Pre-Funded Warrants or Warrants, you will be entitled to exercise the rights of a holder of our common shares only as to matters for which the record date occurs after the exercise date.

The Pre-Funded Warrants and Warrants offered by this prospectus may not have any value.

The Warrants offered by this prospectus will be exercisable for five years from the date of issuance, and the Pre-Funded Warrants will be exercisable at any time until exercised in full. There can be no assurance that the market price of our common shares will ever exceed the exercise prices of the Pre-Funded Warrants or Warrants. In the event that the price of our common shares does not exceed the exercise price of the Pre-Funded Warrants and/or the Warrants during their terms, such Pre-Funded Warrants or Warrants may not have any value.

Investors in this offering may experience immediate dilution in the book value per share of the Offered Shares purchased in the offering.

Table of Contents

The Offered Shares sold in this offering, if any, will be sold from time to time at various prices. However, the expected offering price of the Offered Shares may be substantially higher than the net tangible book value per share of our currently outstanding common shares. After giving effect to the sale of our Offered Shares in the aggregate amount of \$10 million at an assumed offering price of \$2.44 per share, the last reported sale price of our common shares on November 30, 2023 on Nasdaq, and after deducting estimated commissions and estimated offering expenses, our as-adjusted net tangible book value as of September 30, 2023 would have been approximately \$15.79 million, or approximately \$1.31 per common share. While this represents an immediate increase in net tangible book value, future sales of Offered Shares in this offering may represent an immediate increase in net tangible book value to our existing shareholders and an immediate dilution to new investors, depending on the market value of our common shares.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we may in the future offer additional common shares or other securities convertible into or exchangeable for common shares at prices that may not be the same as the price per share in this offering. We may sell common shares or other securities convertible into or exchangeable for our shares of common shares in any other offering at a price per share that is less than the price per share paid by investors in this offering, and investors purchasing shares of common shares or other securities convertible into or exchangeable for our common shares in the future could have rights superior to existing shareholders. The price per share at which we sell additional shares of common shares or other securities convertible or exchangeable into our common shares, in future transactions may be higher or lower than the price per share paid by investors in this offering.

Our management might apply the net proceeds from this offering in ways with which you do not agree and in ways that may impair the value of your investment.

We currently intend to use the net proceeds from this offering for working capital and general corporate purposes. Our management has broad discretion as to the use of these proceeds and you will be relying on the judgment of our management regarding the application of these proceeds. We might apply these proceeds in ways with which you do not agree, or in ways that do not yield a favorable return. If our management applies these proceeds in a manner that does not yield a significant return, if any, on our investment of these net proceeds, it could compromise our ability to pursue our growth strategy and adversely affect the market price of our common shares.

We expect to be a “passive foreign investment company”, which may have adverse U.S. federal income tax consequences for U.S. investors.

We believe we were a “passive foreign investment company” (a “PFIC”) within the meaning of Section 1297 of the U.S. Internal Revenue Code of 1986, as amended (the “Code”) for our most recently completed taxable year and based on the nature of our business, the projected composition of our gross income and the projected composition and estimated fair market values of our assets, we expect to be a PFIC for our current taxable year and may be a PFIC in subsequent tax years. If we are a PFIC for any year during a U.S. taxpayer’s holding period of Common Shares, Pre-Funded Warrants, Warrants, or Warrant Shares (as defined below under the heading “*Certain Material U.S. Federal Income Tax Considerations*”), then such U.S. taxpayer generally will be required to treat any gain realized upon a disposition of the Common Shares, Pre-Funded Warrants, Warrants, or Warrant Shares or any so-called “excess distribution” received on its Common Shares, Pre-Funded Warrants or Warrant Shares as ordinary income, and to pay an interest charge on a portion of such gain or distribution. In certain circumstances, the sum of the tax and the interest charge may exceed the total amount of proceeds realized on the disposition, or the amount of excess distribution received, by the U.S. taxpayer. Subject to certain limitations, these tax consequences may be mitigated if a U.S. taxpayer makes a timely and effective QEF Election (as defined below) with respect to the Common Shares, Pre-Funded Warrants and Warrant Shares or a Mark-to-Market Election (as defined below) with respect to the Common Shares and Warrant Shares. A U.S. taxpayer generally may not make a QEF Election with respect to the Warrants or a Mark-to-Market Election with respect to the Pre-Funded Warrants or Warrants. In addition, U.S. taxpayers should be aware that there can be no assurances that we will satisfy the record keeping requirements that apply to a QEF (as defined below), or that we will supply U.S. taxpayers with information that such U.S. taxpayers are required to report under the QEF rules, in the event that we are a PFIC. Thus, U.S. Holders may not be able to make a QEF Election with respect to their Common Shares, Pre-Funded Warrants and Warrant Shares. A U.S. taxpayer who makes a Mark-to-Market Election generally must include as ordinary income each year the excess of the fair

Table of Contents

market value of the Common Shares or Warrant Shares over the taxpayer's basis therein. Each potential investor who is a U.S. taxpayer should review the discussion below under the heading "*Certain Material U.S. Federal Income Tax Considerations — Passive Foreign Investment Company Rule*" in its entirety and should consult its own tax advisor regarding the tax consequences of the PFIC rules and the acquisition, ownership, and disposition of the Common Shares, Pre-Funded Warrants, Warrants, and the Warrant Shares.

Proposed legislation in the U.S. Congress, including changes in U.S. tax law, and the Inflation Reduction Act of 2022 may adversely impact us and the value of the Common Shares, Pre-Funded Warrants, Warrants and Warrant Shares.

Changes to U.S. tax laws (which changes may have retroactive application) could adversely affect us or holders of the Common Shares, Pre-Funded Warrants, Warrants and Warrant Shares. In recent years, many changes to U.S. federal income tax laws have been proposed and made, and additional changes to U.S. federal income tax laws are likely to continue to occur in the future.

The U.S. Congress is currently considering numerous items of legislation which may be enacted prospectively or with retroactive effect, which legislation could adversely impact our financial performance and the value of the Common Shares, Pre-Funded Warrants, Warrants and Warrant Shares. Additionally, states in which we operate or own assets may impose new or increased taxes. If enacted, most of the proposals would be effective for the current or later years. The proposed legislation remains subject to change, and its impact on us and purchasers of the Common Shares, Pre-Funded Warrants, Warrants and Warrant Shares is uncertain.

In addition, the Inflation Reduction Act of 2022 includes provisions that impact the U.S. federal income taxation of corporations. Among other items, this legislation includes provisions that impose a minimum tax on the book income of certain large corporations and an excise tax on certain corporate stock repurchases that are imposed on the corporation repurchasing such stock. It is unclear how this legislation will be implemented by the U.S. Department of the Treasury and we cannot predict how this legislation or any future changes in tax laws might affect us or purchasers of the Common Shares, Pre-Funded Warrants, Warrants and Warrant Shares.

USE OF PROCEEDS

We estimate that the net proceeds from this offering will be approximately \$9.1 million, assuming a public offering price of \$2.44 per Offered Share and accompanying Warrant, which was the last reported sale price per common share on Nasdaq on November 30, 2023, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us and assuming no sale of Pre-Funded Warrants in this offering and no exercise of the Warrants being issued in this offering.

We intend to use any proceeds from this offering for working capital and general corporate purposes. We cannot specify with certainty all of the particular uses for the net proceeds that we will have from this offering. Therefore, our management will have broad discretion to determine the specific use for the net proceeds and we may use the proceeds for purposes that are not contemplated at the time of this offering.

We will incur all costs associated with this prospectus and the registration statement of which it is a part.

Based on our planned use of the net proceeds from this offering and our existing cash, cash equivalents and short-term restricted bank deposits, an expected second tranche of \$4 million from Hanmi pursuant to a subscription agreement, a committed equity facility, and ATM, we estimate that such funds will be sufficient to enable us to fund our operating expenses and capital expenditure requirements for at least the next 10 months from the date of this prospectus. We have based this estimate on assumptions that may prove to be incorrect, and we could use our available capital resources sooner than we currently expect. In any event, we will require additional funding to complete the clinical development of, and commercialize, our product candidates. We may satisfy our future cash needs through the sale of equity securities, debt financings, working capital lines of credit, corporate collaborations or license agreements, grant funding, interest income earned on invested cash balances or a combination of one or more of these sources.

[Table of Contents](#)

This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. We may also use a portion of the net proceeds to fund or clinical plans. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds received by us in this offering. Predicting the cost necessary to develop product candidates can be difficult and we anticipate that we will need additional funds to complete the development of our existing product candidates and to develop any future product candidates. The amounts and timing of our actual expenditures and the extent of clinical development may vary significantly depending on numerous factors, including the progress of our development efforts, the status of and results from preclinical studies and any ongoing clinical trials or clinical trials we may commence in the future, as well as any collaborations that we may enter into with third parties for our product candidates and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

DILUTION

If you invest in our securities, your ownership interest will be diluted to the extent of the difference between the public offering price per Offered Share and the as adjusted net tangible book value per common share immediately after the closing of this offering.

Our historical net tangible book value as of September 30, 2023 was \$6.7 million, or \$0.89 per common share. Our historical net tangible book value is the amount of our total tangible assets less our liabilities. Historical net tangible book value per common share is our historical net tangible book value divided by the number of common shares outstanding as of September 30, 2023.

After giving effect to the sale of Offered Shares and the Warrants in this offering at an assumed combined public offering price of \$2.44 per Offered Share and Warrant, which was the last reported sale price of our common shares on Nasdaq on November 30, 2023, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, assuming no sale of Pre-Funded Warrants in this offering and excluding the proceeds, if any, from the exercise of the Warrants issued in this offering, our as adjusted net tangible book value as of September 30, 2023 would be \$15.79 million, or \$1.31 per common share. This amount represents an immediate increase in as adjusted net tangible book value of \$0.42 per common share to our existing stockholders and an immediate dilution of \$1.13 per common share to investors participating in this offering. We determine dilution per Offered Share to investors participating in this offering by subtracting as adjusted net tangible book value per common share after this offering from the assumed public offering price per Offered Share paid by investors participating in this offering.

The following table illustrates this dilution on a per Offered Share basis to new investors:

Assumed combined public offering price per Offered Share and Warrant		\$2.44
Historical net tangible book value per common share as of September 30, 2023	\$ 0.89	
Increase in as adjusted net tangible book value per common share attributable to this offering	\$ 0.42	
As adjusted net tangible book value per common share after giving effect to this offering		<u>\$1.31</u>
Dilution per Offered Share to new investors in this offering		<u>\$1.13</u>

Each \$0.10 increase or decrease in the assumed public offering price of \$2.44 per Offered Share and Warrant, which was the last reported sale price of our common share on Nasdaq on November 30, 2023, would increase or decrease the as-adjusted net tangible book value per common share by \$0.02 per common share and the dilution per Offered Share to investors participating in this offering by \$0.08 per Offered Share, assuming that the number of Offered Shares and Warrants offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the Warrants issued in this offering.

[Table of Contents](#)

We may also increase or decrease the number of Offered Shares we are offering. A 1.0 million share increase in the number of Offered Shares and Warrants offered by us, as set forth on the cover page of this prospectus, would increase the as adjusted net tangible book value per common share by approximately \$0.09 and decrease the dilution per Offered Share to new investors participating in this offering by approximately \$0.08, based on an assumed combined public offering price of \$2.44 per Offered Share and Warrant, which was the last reported sale price of our common shares on Nasdaq on November 30, 2023, remaining the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the Warrants issued in this offering. A 1.0 million share decrease in the number of Offered Shares and Warrants offered by us, as set forth on the cover page of this prospectus, would decrease the as adjusted net tangible book value per Offered Share after this offering by approximately \$0.09 and increase the dilution per Offered Share to new investors participating in this offering by approximately \$0.09, based on an assumed combined public offering price of \$2.44 per Offered Share and Warrant, which was the last reported sale price of our common shares on Nasdaq on November 30, 2023, remaining the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the Warrants issued in this offering.

The information discussed above is illustrative only and will adjust based on the actual public offering price, the actual number of Offered Shares and Warrants that we offer in this offering, and other terms of this offering determined at pricing. The discussion and table above assume (i) no sale of Pre-Funded Warrants, which, if sold, would reduce the number of Offered Shares that we are offering on a one-for-one basis and (ii) no exercise of Warrants sold in this offering.

UNDERWRITING

We entered into an underwriting agreement with the underwriters named below on _____, 2023. Oppenheimer & Co. Inc. is acting as representative of the underwriters.

The underwriting agreement provides for the purchase of a specific number of Offered Shares and Warrants to purchase Offered Shares, or Pre-Funded Warrants and Warrants to purchase Offered Shares, as applicable. Subject to the terms and conditions of the underwriting agreement, each underwriter has severally agreed to purchase the number of Offered Shares, Pre-Funded Warrants and Warrants set forth opposite its name below:

Underwriters	Number of Offered Shares	Number of Pre-Funded Warrants	Number of Warrants
Oppenheimer & Co. Inc.			
Total			

The underwriters have agreed to purchase all of the Offered Shares, or Pre-Funded Warrants and Warrants, as applicable offered by this prospectus, if any are purchased.

The Offered Shares or Pre-Funded Warrants, as applicable, and accompanying Warrants offered hereby are expected to be ready for delivery on or about _____, 2023 against payment in immediately available funds. The Offered Shares or Pre-Funded Warrants, and the accompanying Warrants are immediately separable and will be issued separately in this offering, but must be purchased together in this offering.

The underwriters are offering the Offered Shares, Pre-Funded Warrants and Warrants subject to various conditions and may reject all or part of any order. The representative of the underwriters has advised us that the underwriters propose to offer the Offered Shares, Pre-Funded Warrants and Warrants to the public at the public offering price set forth on the cover page of this prospectus and to dealers at a price less a concession not in excess of \$ _____ per Offered Share and accompanying Warrant, or per Pre-Funded Warrant and accompanying Warrant, as applicable. After the Offered Shares, Pre-Funded Warrants and Warrants are released for sale to the public, the representative may change the offering price, the concession, and other selling terms at various times.

The following table provides information regarding the amount of the discounts and commissions to be paid to the underwriters by us, before expenses:

	Total Per Offered Share and Warrant	Total Per Pre-Funded Warrant and Warrant
Public offering price	\$ _____	\$ _____
Underwriting discounts and commissions(1)	\$ _____	\$ _____
Proceeds, before expenses, to us	\$ _____	\$ _____

(1) We have agreed to pay the underwriters a commission of 6.0% of the gross proceeds of this offering.

We estimate that our total expenses of the offering, excluding the estimated underwriting discounts and commissions, will be approximately \$[•]. We have agreed to reimburse the underwriters for certain of their expenses in an amount up to \$125,000.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

Subject to certain conditions, we granted Oppenheimer & Co., Inc., for a period of twelve months after the date of the closing of this offering, a right of first refusal to act as lead bookrunning underwriter, lead initial purchaser, lead placement agent or lead selling agent, as the case may be in connection with any financing for the Company.

In connection with this offering, we, our directors, executive officers, and certain shareholders have agreed not to offer, issue, sell, contract to sell, encumber, grant any option for the sale of or otherwise dispose of any of our common shares or securities convertible into or exchangeable for, or that represent the right to receive, common shares, for a period of 90 days following the closing of the offering. This means that, subject to certain exceptions, for a period of 90 days following the date of this prospectus, we and such persons may not offer, sell, pledge or otherwise dispose of these securities without the prior written consent of Oppenheimer & Co. Inc.

Table of Contents

Rules of the SEC may limit the ability of the underwriters to bid for or purchase Offered Shares before the distribution of the Offered Shares pursuant to the offering is completed. However, the underwriters may engage in the following activities in accordance with the rules:

- Stabilizing transactions – The representative may make bids or purchases for the purpose of pegging, fixing or maintaining the price of the Offered Shares, so long as stabilizing bids do not exceed a specified maximum.
- Penalty bids – If the representative purchases Offered Shares in the open market in a stabilizing transaction or syndicate covering transaction, it may reclaim a selling concession from the underwriters and selling group members who sold those Offered Shares as part of the offering.
- Passive market making – Market makers in the Offered Shares who are underwriters or prospective underwriters may make bids for or purchases of Offered Shares, subject to limitations, until the time, if ever, at which a stabilizing bid is made.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales or to stabilize the market price of the Offered Shares may have the effect of raising or maintaining the market price of the Offered Shares or preventing or mitigating a decline in the market price of the Offered Shares. As a result, the price of the Offered Shares may be higher than the price that might otherwise exist in the open market. The imposition of a penalty bid might also have an effect on the price of the Offered Shares if it discourages resales of the Offered Shares.

Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of the Offered Shares. These transactions may occur on Nasdaq or otherwise. If such transactions are commenced, they may be discontinued without notice at any time.

Electronic Delivery of Preliminary Prospectus

A prospectus in electronic format may be delivered to potential investors by one or more of the underwriters participating in the offering. The prospectus in electronic format will be identical to the paper version of such prospectus. Other than the prospectus in electronic format, the information on any underwriter's website and any information contained in any other website maintained by an underwriter is not part of this prospectus or the registration statement of which this prospectus forms a part.

Notice to Non-U.S. Investors

Belgium

The offering is exclusively conducted under applicable private placement exemptions and therefore it has not been and will not be notified to, and this document or any other offering material relating to the Offered Shares, Pre-Funded Warrants and Warrants has not been and will not be approved by, the Belgian Banking, Finance and Insurance Commission ("Commission bancaire, financière et des assurances/Commissie voor het Bank, Financie en Assurantiewezen"). Any representation to the contrary is unlawful.

Each underwriter has undertaken not to offer sell, resell, transfer or deliver directly or indirectly, any Offered Shares, Pre-Funded Warrants and Warrants, or to take any steps relating/ancillary thereto, and not to distribute or publish this document or any other material relating to the Offered Shares, Pre-Funded Warrants and Warrants or to the offering in a manner which would be construed as: (a) a public offering under the Belgian Royal Decree of 7 July 1999 on the public character of financial transactions; or (b) an offering of securities to the public under Directive 2003/71/EC which triggers an obligation to publish a prospectus in Belgium. Any action contrary to these restrictions will cause the recipient and the company to be in violation of the Belgian securities laws.

Table of Contents

Canada

Any distribution of securities in Canada will be made only on a private placement basis exempt from the requirement that we prepare and file a prospectus with the securities regulatory authorities in any province where distributions of the securities are made. Any offering in Canada will be done by way of a separate Canadian offering memorandum that will be attached to and incorporate this prospectus supplement.

France

Neither this prospectus nor any other offering material relating to the Offered Shares, Pre-Funded Warrants and Warrants has been submitted to the clearance procedures of the Autorité des marchés financiers in France. The Offered Shares, Pre-Funded Warrants and Warrants have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France. Neither this prospectus nor any other offering material relating to the Offered Shares, Pre-Funded Warrants and Warrants has been or will be: (a) released, issued, distributed or caused to be released, issued or distributed to the public in France; or (b) used in connection with any offer for subscription or sale of the Offered Shares, Pre-Funded Warrants and Warrants to the public in France. Such offers, sales and distributions will be made in France only: (i) to qualified investors (*investisseurs qualifiés*) and/or to a restricted circle of investors (*cercle restreint d'investisseurs*), in each case investing for their own account, all as defined in and in accordance with Articles L.411-2, D.411-1, D.411-2, D.734-1, D.744-1, D.754-1 and D.764-1 of the French Code monétaire et financier; (ii) to investment services providers authorised to engage in portfolio management on behalf of third parties; or (iii) in a transaction that, in accordance with article L.411-2-II-1^o-or-2^o-or-3^o of the French Code monétaire et financier and article 211-2 of the General Regulations (*Règlement Général*) of the *Autorité des marchés financiers*, does not constitute a public offer (appel public à l'épargne). Such Offered Shares, Pre-Funded Warrants and Warrants may be resold only in compliance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 through L.621-8-3 of the French Code *monétaire et financier*.

Israel

This prospectus does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In the State of Israel, this document is being distributed only to, and is directed only at, and any offer of the Offered Shares, Pre-Funded Warrants and Warrants is directed only at, investors listed in the first addendum to the Israeli Securities Law, or the Addendum, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals", each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors will be required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

Italy

The offering of the Offered Shares, Pre-Funded Warrants and Warrants offered hereby in Italy has not been registered with the *Commissione Nazionale per la Società e la Borsa*, or CONSOB, pursuant to Italian securities legislation and, accordingly, the Offered Shares, Pre-Funded Warrants and Warrants offered hereby cannot be offered, sold or delivered in the Republic of Italy, or Italy, nor may any copy of this prospectus or any other document relating to the Offered Shares, Pre-Funded Warrants and Warrants offered hereby be distributed in Italy other than to professional investors (*operatori qualificati*) as defined in Article 31, second paragraph, of CONSOB Regulation No. 11522 of 1 July, 1998 as subsequently amended. Any offer, sale or delivery of the Offered Shares, Pre-Funded Warrants and Warrants offered hereby or distribution of copies of this prospectus or any other document relating to the Offered Shares, Pre-Funded Warrants and Warrants offered hereby in Italy must be made:

- (a) by an investment firm, bank or intermediary permitted to conduct such activities in Italy in accordance with Legislative Decree No. 58 of 24 February 1998 and Legislative Decree No. 385 of 1 September 1993, or the Banking Act;

Table of Contents

- (b) in compliance with Article 129 of the Banking Act and the implementing guidelines of the Bank of Italy; and
- (c) in compliance with any other applicable laws and regulations and other possible requirements or limitations which may be imposed by Italian authorities.

Sweden

This prospectus has not been nor will it be registered with or approved by Finansinspektionen (the Swedish Financial Supervisory Authority). Accordingly, this prospectus may not be made available, nor may the Offered Shares, Pre-Funded Warrants and Warrants offered hereunder be marketed and offered for sale in Sweden, other than under circumstances which are deemed not to require a prospectus under the Financial Instruments Trading Act (1991: 980).

Switzerland

The Offered Shares, Pre-Funded Warrants and Warrants offered pursuant to this prospectus will not be offered, directly or indirectly, to the public in Switzerland and this prospectus does not constitute a public offering prospectus as that term is understood pursuant to art. 652a or art. 1156 of the Swiss Federal Code of Obligations. The company has not applied for a listing of the Offered Shares, Pre-Funded Warrants and Warrants being offered pursuant to this prospectus on the SWX Swiss Exchange or on any other regulated securities market, and consequently, the information presented in this prospectus does not necessarily comply with the information standards set out in the relevant listing rules. The Offered Shares, Pre-Funded Warrants and Warrants being offered pursuant to this prospectus have not been registered with the Swiss Federal Banking Commission as foreign investment funds, and the investor protection afforded to acquirers of investment fund certificates does not extend to acquirers of Offered Shares, Pre-Funded Warrants and Warrants.

Investors are advised to contact their legal, financial or tax advisers to obtain an independent assessment of the financial and tax consequences of an investment in Offered Shares, Pre-Funded Warrants and Warrants.

European Economic Area and the United Kingdom

In relation to each Member State of the European Economic Area and the United Kingdom, each referred to as a Relevant State, no Offered Shares, Pre-Funded Warrants or Warrants have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the Offered Shares, Pre-Funded Warrants and Warrants which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation), except that offers of Offered Shares, Pre-Funded Warrants and Warrants may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- (a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the underwriters for any such offer; or
- (c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of Offered Shares, Pre-Funded Warrants or Warrants shall require us or any of underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

Each person in a Relevant State who initially acquires any Offered Shares, Pre-Funded Warrants or Warrants or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with us and the underwriters that it is a qualified investor within the meaning of the Prospectus Regulation.

Table of Contents

In the case of any Offered Shares, Pre-Funded Warrants or Warrants being offered to a financial intermediary as that term is used in Article 5(1) of the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the Offered Shares, Pre-Funded Warrants or Warrants acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer to the public other than their offer or resale in a Relevant State to qualified investors, in circumstances in which the prior consent of the underwriters has been obtained to each such proposed offer or resale.

We, the underwriters and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

For the purposes of this provision, the expression an “offer to the public” in relation to any Offered Shares, Pre-Funded Warrants or Warrants in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any Offered Shares, Pre-Funded Warrants or Warrants to be offered so as to enable an investor to decide to purchase or subscribe for any Offered Shares, Pre-Funded Warrants or Warrants, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129.

References to the Prospectus Regulation includes, in relation to the United Kingdom, the Prospectus Regulation as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018.

The above selling restriction is in addition to any other selling restrictions set out below.

United Kingdom

This document is for distribution only to persons who (i) have professional experience in matters relating to investments and who qualify as investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the Financial Promotion Order), (ii) are persons falling within Article 49(2)(a) to (d), or high net worth companies, unincorporated associations etc., of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, as amended, or FSMA,) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as “relevant persons”). This document is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is available only to relevant persons and will be engaged in only with relevant persons.

CERTAIN MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following is a general summary of certain material U.S. federal income tax considerations applicable to a U.S. Holder (as defined below) arising from and relating to the acquisition, ownership and disposition of Offered Shares and Warrants (one Offered Share and one Warrant acquired together pursuant to this offering is referred to in this summary as a “Offered Share Unit”) or Pre-Funded Warrants and Warrants (one Pre-Funded Warrant and one Warrant acquired together pursuant to this offering is referred to in this summary as a “Pre-Funded Warrant Unit”), the acquisition, ownership, and disposition of Offered Shares acquired as part of the Offered Share Units, the acquisition, ownership and disposition of Pre-Funded Warrants acquired as part of the Pre-Funded Warrant Units, the exercise, disposition, and lapse of Warrants acquired as part of the Offered Share Units or the Pre-Funded Warrant Units, the acquisition, ownership, and disposition of Offered Shares received upon exercise of the Pre-Funded Warrants, and the acquisition, ownership and disposition of Offered Shares received upon exercise of the Warrants (as used in this summary, the “Warrant Shares”), all as acquired pursuant to this offering. This summary is for general information purposes only and does not purport to be a complete analysis or listing of all potential U.S. federal income tax considerations that may apply to a U.S. Holder arising from or relating to the acquisition, ownership and disposition of Offered Share Units or Pre-Funded Warrant Units acquired pursuant to this offering. In addition, this summary does not take into account the individual facts and circumstances of any particular U.S. Holder that may affect the U.S. federal income tax consequences to such U.S. Holder, including, without limitation, specific tax consequences to a U.S. Holder under an applicable income tax treaty. Accordingly, this summary is not intended to be, and should not be construed as, legal or U.S. federal income tax advice with respect to any particular U.S. Holder. This summary does not address the U.S. federal alternative minimum, U.S. federal net investment income, U.S. federal estate and gift, U.S. state and local, and non-U.S. tax consequences to U.S. Holders of the acquisition, ownership and disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares. In addition, except as specifically set forth below, this summary does not discuss applicable income tax reporting requirements. Each prospective U.S. Holder should consult its own tax advisors regarding the U.S. federal income, U.S. federal alternative minimum, U.S. federal net investment income, U.S. federal estate and gift, U.S. state and local, and non-U.S. tax consequences relating to the acquisition, ownership and disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares.

No ruling from the Internal Revenue Service (the “IRS”) has been requested, or will be obtained, regarding the U.S. federal income tax consequences of the acquisition, ownership and disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares. This summary is not binding on the IRS, and the IRS is not precluded from taking a position that is different from, or contrary to, the positions taken in this summary. In addition, because the authorities on which this summary is based are subject to various interpretations, the IRS and the U.S. courts could disagree with one or more of the conclusions described in this summary.

Scope of this Summary

Authorities

This summary is based on the U.S. Internal Revenue Code of 1986, as amended (the “Code”), Treasury Regulations (whether final, temporary, or proposed) promulgated thereunder, published rulings of the IRS, published administrative positions of the IRS, the current provisions of the Convention Between Canada and the United States of America with respect to Taxes on Income and on Capital of 1980, as amended (the “Canada-U.S. Tax Treaty”), and U.S. court decisions that are applicable, and, in each case, as in effect and available, as of the date of this document. Any of the authorities on which this summary is based could be changed in a material and adverse manner at any time, and any such change could be applied on a retroactive or prospective basis, which could affect the U.S. federal income tax considerations described in this summary. Except as provided herein, this summary does not discuss the potential effects, whether adverse or beneficial, of any proposed legislation that, if enacted, could be applied on a retroactive or prospective basis.

Table of Contents

U.S. Holders

For purposes of this summary, the term “U.S. Holder” means a beneficial owner of Offered Share Units, Pre-Warrant Funded Units, Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares as acquired pursuant to this offering, that is for U.S. federal income tax purposes:

- An individual who is a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) organized under the laws of the United States, any state thereof or the District of Columbia;
- an estate whose income is subject to U.S. federal income taxation regardless of its source; or
- a trust that (1) is subject to the primary supervision of a court within the U.S. and the control of one or more U.S. persons for all substantial decisions or (2) has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

Non-U.S. Holders

For purposes of this summary, a “non-U.S. Holder” is a beneficial owner of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares that is not a U.S. Holder or an entity or arrangement classified as a partnership for U.S. federal income tax purposes. This summary does not address the U.S. federal, state or local tax consequences to non-U.S. Holders arising from or relating to the acquisition, ownership and disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares. Accordingly, a non-U.S. Holder should consult its own tax advisors regarding the U.S. federal, state or local and non-U.S. tax consequences (including the potential application of and operation of any income tax treaties) relating to the acquisition, ownership and disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares.

U.S. Holders Subject to Special U.S. Federal Income Tax Rules Not Addressed

This summary does not address the U.S. federal income tax considerations applicable to U.S. Holders that are subject to special provisions under the Code, including, but not limited to U.S. Holders that: (a) are tax-exempt organizations, qualified retirement plans, individual retirement accounts, or other tax-deferred accounts; (b) are financial institutions, underwriters, insurance companies, real estate investment trusts, or regulated investment companies; (c) are broker-dealers, dealers, or traders in securities or currencies that elect to apply a mark-to-market accounting method; (d) have a “functional currency” other than the U.S. dollar; (e) own Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares as part of a straddle, hedging transaction, conversion transaction, constructive sale, or other integrated transaction; (f) acquire Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares in connection with the exercise of employee stock options or otherwise as compensation for services; (g) hold Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares other than as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment purposes); (h) are subject to the alternative minimum tax; (i) are subject to special tax accounting rules with respect to the Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares; (j) are partnerships or other “pass-through” entities (and partners or other owners thereof); (k) are S corporations (and shareholders thereof); (l) are U.S. expatriates or former long-term residents of the United States subject to Section 877 or 877A of the Code; (m) hold Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares in connection with a trade or business, permanent establishment, or fixed base outside the United States; or (n) own or have owned or will own (directly, indirectly, or by attribution) 10% or more of the total combined voting power or value of our outstanding shares. U.S. Holders that are subject to special provisions under the Code, including, but not limited to, U.S. Holders described immediately above, should consult their own tax advisors regarding the U.S. federal income, U.S. federal alternative minimum, U.S. federal net investment income, U.S. federal estate and gift, U.S. state and local, and non-U.S. tax consequences relating to the acquisition, ownership and disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares.

Table of Contents

If an entity or arrangement that is classified as a partnership (or other “pass-through” entity) for U.S. federal income tax purposes holds Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares, the U.S. federal income tax consequences to such entity or arrangement and the partners (or other owners or participants) of such entity or arrangement generally will depend on the activities of the entity or arrangement and the status of such partners (or owners or participants). This summary does not address the tax consequences to any such partner (or owner or participant). Partners (or other owners or participants) of entities or arrangements that are classified as partnerships or as “pass-through” entities for U.S. federal income tax purposes should consult their own tax advisors regarding the U.S. federal income tax consequences arising from and relating to the acquisition, ownership and disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares.

U.S. Federal Income Tax Consequences of the Acquisition of Offered Share Units or Pre-Funded Warrant Units

For U.S. federal income tax purposes, the acquisition by a U.S. Holder of an Offered Share Unit will be treated as the acquisition of one Offered Share and one Warrant. The purchase price for each Offered Share Unit will be allocated between these two components in proportion to their relative fair market values at the time the Offered Share Unit is purchased by the U.S. Holder. This allocation of the purchase price for each Offered Share Unit will establish a U.S. Holder’s initial tax basis for U.S. federal income tax purposes in the Offered Share and one Warrant that comprise each Offered Share Unit.

For this purpose, we will allocate US\$2.43 of the purchase price for the Offered Share Unit to the Offered Share and US\$0.01 of the purchase price for each Offered Share Unit to the Warrant. However, the IRS will not be bound by such allocation of the purchase price for the Offered Share Units, and therefore, the IRS or a U.S. court may not respect the allocation set forth above. Each U.S. Holder should consult its own tax advisor regarding the allocation of the purchase price for the Offered Share Units.

For U.S. federal income tax purposes, the acquisition by a U.S. Holder of a Pre-Funded Warrant Unit will be treated as the acquisition of one Pre-Funded Warrant and one Warrant. The purchase price for each Pre-Funded Warrant Unit will be allocated between these two components in proportion to their relative fair market values at the time the Pre-Funded Warrant Unit is purchased by the U.S. Holder. This allocation of the purchase price for each Pre-Funded Warrant Unit will establish a U.S. Holder’s initial tax basis for U.S. federal income tax purposes in the Pre-Funded Warrant and one Warrant that comprise each Pre-Funded Warrant Unit.

For this purpose, we will allocate US\$2.43 of the purchase price for the Pre-Funded Warrant Unit to the Pre-Funded Warrant and US\$0.01 of the purchase price for each Pre-Funded Warrant Unit to the Warrant. However, the IRS will not be bound by such allocation of the purchase price for the Pre-Funded Warrant Units, and therefore, the IRS or a U.S. court may not respect the allocation set forth above. Each U.S. Holder should consult its own tax advisor regarding the allocation of the purchase price for the Pre-Funded Warrant Units.

Treatment of Pre-Funded Warrants

Although it is not entirely free from doubt, we believe that a Pre-Funded Warrant should be treated as a separate class of our common shares for U.S. federal income tax purposes and a U.S. Holder of Pre-Funded Warrants should generally be taxed in the same manner as a holder of Offered Shares except as described below. Accordingly, no gain or loss should be recognized upon the exercise of a Pre-Funded Warrant and, upon exercise, the holding period of a Pre-Funded Warrant should carry over to the Offered Shares received. Similarly, the tax basis of the Pre-Funded Warrant should carry over to the Offered Shares received upon exercise, increased by the exercise price of \$0.01 per Offered Share. However, such characterization is not binding on the IRS, and the IRS may treat the Pre-Funded Warrants as warrants to acquire Offered Shares. If so, the amount and character of a U.S. Holder’s gain with respect to an investment in Pre-Funded Warrants could change, and a U.S. Holder may not be entitled to make the “QEF Election” described below with respect to the Pre-Funded Warrants to mitigate PFIC consequences in the event that

Table of Contents

we are classified as a PFIC. A U.S. Holder generally may not make a Mark-to-Market Election with respect to the Pre-Funded Warrants. Accordingly, each U.S. Holder should consult its own tax advisor regarding the risks associated with the acquisition of a Pre-Funded Warrant pursuant to this offering (including potential alternative characterizations). The balance of this discussion generally assumes that the characterization described above is respected for U.S. federal income tax purposes.

Passive Foreign Investment Company Rules

If we were to constitute a “passive foreign investment company” or “PFIC” for any year during a U.S. Holder’s holding period, then certain potentially adverse rules would affect the U.S. federal income tax consequences to a U.S. Holder resulting from the acquisition, ownership and disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares. We believe we were a “passive foreign investment company” (a “PFIC”) within the meaning of Section 1297 of the Code for our most recently completed taxable year and based on the nature of our business, the projected composition of our gross income and the projected composition and estimated fair market values of our assets, we expect to be a PFIC for our current taxable year and may be a PFIC in subsequent tax years. No opinion of legal counsel or ruling from the IRS concerning our status as a PFIC has been obtained or is currently planned to be requested. The determination of whether any corporation was, or will be, a PFIC for a tax year depends, in part, on the application of complex U.S. federal income tax rules, which are subject to differing interpretations. In addition, whether any corporation will be a PFIC for any tax year depends on the assets and income of such corporation over the course of each such tax year and, as a result, cannot be predicted with certainty as of the date of this document. Accordingly, there can be no assurance that the IRS will not challenge any determination made by us (or any of our non-U.S. subsidiaries) concerning our (or its) PFIC status. Each U.S. Holder should consult its own tax advisors regarding our PFIC status of the PFIC status of each of our non-U.S. subsidiaries.

In any year in which we are classified as a PFIC, a U.S. Holder will be required to file an annual report with the IRS containing such information as Treasury Regulations and/or other IRS guidance may require. In addition to penalties, a failure to satisfy such reporting requirements may result in an extension of the time period during which the IRS can assess a tax. U.S. Holders should consult their own tax advisors regarding the requirements of filing such information returns under these rules, including the requirement to file an IRS Form 8621 annually.

We generally will be a PFIC if, for a tax year, (a) 75% or more of our gross income in such tax year is passive income (the “PFIC income test”) or (b) 50% or more of the value of our assets either produce passive income or are held for the production of passive income, based on the quarterly average of the fair market value of such assets (the “PFIC asset test”). “Gross income” generally includes all sales revenues less the cost of goods sold, plus income from investments and from incidental or outside operations or sources, and “passive income” generally includes, for example, dividends, interest, certain rents and royalties, certain gains from the sale of stock and securities, and certain gains from commodities transactions. Active business gains arising from the sale of commodities generally are excluded from passive income if substantially all of a foreign corporation’s commodities are stock in trade or inventory, depreciable property used in a trade or business, or supplies regularly used or consumed in the ordinary course of its trade or business, and certain other requirements are satisfied.

For purposes of the PFIC income test and PFIC asset test described above, if we own, directly or indirectly, 25% or more of the total value of the outstanding shares of another corporation, we will be treated as if we (a) held a proportionate share of the assets of such other corporation and (b) received directly a proportionate share of the income of such other corporation. In addition, for purposes of the PFIC income test and PFIC asset test described above, and assuming certain other requirements are met, “passive income” does not include certain interest, dividends, rents, or royalties that are received or accrued by us from certain “related persons” (as defined in Section 954(d)(3) of the Code) also organized in Canada, to the extent such items are properly allocable to the income of such related person that is not passive income.

Under certain attribution rules, if we are a PFIC, U.S. Holders will generally be deemed to own their proportionate share of our direct or indirect equity interest in any company that is also a PFIC (a “Subsidiary PFIC”), and will generally be subject to U.S. federal income tax as described below under “*Default PFIC Rules Under Section 1291 of the Code*” on their proportionate share of (a) any “excess distributions,” as described below, on the stock of a Subsidiary PFIC and (b) a disposition or deemed disposition of the stock of a Subsidiary PFIC by us or another

Table of Contents

Subsidiary PFIC, both as if such U.S. Holders directly held the shares of such Subsidiary PFIC. In addition, U.S. Holders may be subject to U.S. federal income tax on any indirect gain realized on the stock of a Subsidiary PFIC on the sale or disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares. Accordingly, U.S. Holders should be aware that they could be subject to tax under the PFIC rules even if no distributions are received and no redemptions or other dispositions of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares are made.

Default PFIC Rules Under Section 1291 of the Code

If we are a PFIC for any tax year during which a U.S. Holder owns Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares, the U.S. federal income tax consequences to such U.S. Holder of the acquisition, ownership, and disposition of Offered Share Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares will depend on whether such U.S. Holder makes a “qualified electing fund” or “QEF” election (a “QEF Election”) with respect to the Offered Shares, Pre-Funded Warrants or Warrant Shares or makes a mark-to-market election under Section 1296 of the Code (a “Mark-to-Market Election”) with respect to Offered Shares or Warrant Shares. A U.S. Holder that does not make either a QEF Election or a Mark-to-Market Election (a “Non-Electing U.S. Holder”) will be taxable as described below.

A Non-Electing U.S. Holder will be subject to the rules of Section 1291 of the Code (described below) with respect to: (a) any gain recognized on the sale or other taxable disposition of Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares; and (b) any “excess distribution” received on the Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares. A distribution generally will be an “excess distribution” to the extent that such distribution (together with all other distributions received in the current tax year) exceeds 125% of the average distributions received during the three preceding tax years (or during a U.S. Holder’s holding period for the Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares, if shorter).

Under Section 1291 of the Code, any gain recognized on the sale or other taxable disposition of Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares of a PFIC (including an indirect disposition of the stock of any Subsidiary PFIC), and any “excess distribution” received on Offered Shares, Pre-Funded Warrants and Warrant Shares or a distribution by a Subsidiary PFIC to its shareholder that is deemed to be received by a U.S. Holder (including a constructive distribution on the Warrants), must be ratably allocated to each day in a Non-Electing U.S. Holder’s holding period for the respective Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares. The amount of any such gain or excess distribution allocated to the tax year of disposition or distribution of the excess distribution and to years before the entity became a PFIC, if any, would be taxed as ordinary income (and not eligible for certain preferential tax rates, as discussed below). The amounts allocated to any other tax year would be subject to U.S. federal income tax at the highest tax rate applicable to ordinary income in each such year, and an interest charge would be imposed on the tax liability for each such year, calculated as if such tax liability had been due in each such year. A Non-Electing U.S. Holder that is not a corporation must treat any such interest paid as “personal interest,” which is not deductible.

If we are a PFIC for any tax year during which a Non-Electing U.S. Holder holds Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares, we will continue to be treated as a PFIC with respect to such Non-Electing U.S. Holder, regardless of whether we cease to be a PFIC in one or more subsequent tax years. If we cease to be a PFIC, a Non-Electing U.S. Holder may terminate this deemed PFIC status with respect to Offered Shares, Pre-Funded Warrants and Warrant Shares by electing to recognize gain (which will be taxed under the rules of Section 1291 of the Code discussed above), but not loss, as if such Offered Shares, Pre-Funded Warrants and Warrant Shares were sold on the last day of the last tax year for which we were a PFIC. No such election, however, may be made with respect to the Warrants.

Under proposed Treasury Regulations, if a U.S. Holder has an option, warrant, or other right to acquire stock of a PFIC (such as the Warrants), such option, warrant or right is considered to be PFIC stock subject to the default rules of Section 1291 of the Code. Under rules described below, the holding period for the Warrant Shares will begin on the date a U.S. Holder acquires the Offered Share Units or Pre-Funded Warrant Unit, as applicable. This will impact the availability of the QEF Election and Mark-to-Market Election with respect to the Warrant Shares. Thus, a U.S. Holder will have to account for Warrant Shares, Pre-Funded Warrants and Offered Shares under the PFIC rules and the applicable elections differently.

QEF Election

A U.S. Holder that makes a timely and effective QEF Election for the first tax year in which the holding period of its Offered Shares or Pre-Funded Warrants begins generally will not be subject to the rules of Section 1291 of the Code discussed above with respect to its Offered Shares or Pre-Funded Warrants. However, a U.S. Holder that makes a timely and effective QEF Election will be subject to U.S. federal income tax on such U.S. Holder's pro rata share of (a) our net capital gain, which will be taxed as long-term capital gain to such U.S. Holder, and (b) our ordinary earnings, which will be taxed as ordinary income to such U.S. Holder. Generally, "net capital gain" is the excess of (a) net long-term capital gain over (b) net short-term capital loss, and "ordinary earnings" are the excess of (a) "earnings and profits" over (b) net capital gain. A U.S. Holder that makes a QEF Election will be subject to U.S. federal income tax on such amounts for each tax year in which we are a PFIC, regardless of whether such amounts are actually distributed to such U.S. Holder by us. However, for any tax year in which we are a PFIC and have no net income or gain, U.S. Holders that have made a QEF Election would not have any income inclusions as a result of the QEF Election. If a U.S. Holder that made a QEF Election has an income inclusion, such a U.S. Holder may, subject to certain limitations, elect to defer payment of current U.S. federal income tax on such amounts, subject to an interest charge. If such U.S. Holder is not a corporation, any such interest paid will be treated as "personal interest," which is not deductible.

A U.S. Holder that makes a timely and effective QEF Election with respect to us generally (a) may receive tax-free distribution from us to the extent that such distribution represents our "earnings and profits" that were previously included in income by the U.S. Holder because of such QEF Election and (b) will adjust such U.S. Holder's tax basis in the Offered Shares or Pre-Funded Warrants to reflect the amount included in income or allowed as a tax-free distribution because of such QEF Election. In addition, a U.S. Holder that makes a QEF Election generally will recognize capital gain or loss on the sale or other taxable disposition of Offered Shares or Pre-Funded Warrants.

The procedure for making a QEF Election, and the U.S. federal income tax consequences of making a QEF Election, will depend on whether such QEF Election is timely. A QEF Election will be treated as "timely" for purposes of avoiding the default PFIC rules discussed above if such QEF Election is made for the first year in the U.S. Holder's holding period for the Offered Shares or Pre-Funded Warrants in which we are a PFIC. A U.S. Holder may make a timely QEF Election by filing the appropriate QEF Election documents at the time such U.S. Holder files a U.S. federal income tax return for such year.

A QEF Election will apply to the tax year for which such QEF Election is timely made and to all subsequent tax years, unless such QEF Election is invalidated or terminated or the IRS consents to revocation of such QEF Election. If a U.S. Holder makes a QEF Election and, in a subsequent tax year, we cease to be a PFIC, the QEF Election will remain in effect (although it will not be applicable) during those tax years in which we are not a PFIC. Accordingly, if we become a PFIC in another subsequent tax year, the QEF Election will be effective and the U.S. Holder will be subject to the QEF rules described above during any subsequent tax year in which we qualify as a PFIC.

As discussed above, under proposed Treasury Regulations, if a U.S. Holder has an option, warrant or other right to acquire stock of a PFIC (such as the Warrants), such option, warrant or right is considered to be PFIC stock subject to the default rules of Section 1291 of the Code. However, a U.S. Holder of an option, warrant or other right to acquire stock of a PFIC may not make a QEF Election that will apply to the option, warrant or other right to acquire PFIC stock. In addition, under proposed Treasury Regulations, if a U.S. Holder holds an option, warrant or other right to acquire stock of a PFIC, the holding period with respect to shares of stock of the PFIC acquired upon exercise of such option, warrant or other right will include the period that the option, warrant or other right was held.

Consequently, under the proposed Treasury Regulations, if a U.S. Holder of Offered Shares makes a QEF Election, such election generally will not be treated as a timely QEF Election with respect to Warrant Shares and the rules of Section 1291 of the Code discussed above will continue to apply with respect to such U.S. Holder's Warrant Shares. However, a U.S. Holder of Warrant Shares should be eligible to make a timely QEF Election if such U.S. Holder makes a "purging" or "deemed sale" election to recognize gain (which will be taxed under the default rules of Section 1291 of the Code discussed above) as if such Warrant Shares were sold for fair market value. As a result of the "purging" or "deemed sale" election, the U.S. Holder will have a new basis and holding period in the Warrant

Table of Contents

Shares acquired upon the exercise of the Warrants for purposes of the PFIC rules. In addition, gain recognized on the sale or other taxable disposition (other than by exercise) of the Warrants by a U.S. Holder will be subject to the rules of Section 1291 of the Code discussed above. Each U.S. Holder should consult its own tax advisor regarding the application of the PFIC rules to the Offered Share Purchase Units, Pre-Funded Warrant Units, Offered Shares, Pre-Funded Warrants, Warrants, and Warrant Shares.

U.S. Holders should be aware that there can be no assurances that we will satisfy the record keeping requirements that apply to a QEF, or that we will supply U.S. Holders with information that such U.S. Holders are required to report under the QEF rules, in the event that we are a PFIC. Thus, U.S. Holders may not be able to make a QEF Election with respect to their Offered Shares, Pre-Funded Warrants or Warrant Shares. Each U.S. Holder should consult its own tax advisors regarding the availability of, and procedure for making, a QEF Election with respect to us and any Subsidiary PFIC.

A U.S. Holder makes a QEF Election by attaching a completed IRS Form 8621, including a PFIC Annual Information Statement, to a timely filed United States federal income tax return. However, if we do not provide the required information with regard to us or any of our Subsidiary PFICs, U.S. Holders will not be able to make a QEF Election for such entity and will continue to be subject to the rules of Section 1291 of the Code discussed above that apply to Non-Electing U.S. Holders with respect to the taxation of gains and excess distributions.

Mark-to-Market Election

A U.S. Holder may make a Mark-to-Market Election with respect to Offered Shares and Warrant Shares only if the Offered Shares and Warrant Shares are marketable stock. The Offered Shares and Warrant Shares generally will be “marketable stock” if the Offered Shares and Warrant Shares are regularly traded on (a) a national securities exchange that is registered with the SEC, (b) the national market system established pursuant to section 11A of the Exchange Act, or (c) a foreign securities exchange that is regulated or supervised by a governmental authority of the country in which the market is located, provided that (i) such foreign exchange has trading volume, listing, financial disclosure, and surveillance requirements, and meets other requirements and the laws of the country in which such foreign exchange is located, together with the rules of such foreign exchange, ensure that such requirements are actually enforced and (ii) the rules of such foreign exchange effectively promote active trading of listed stocks. If such stock is traded on such a qualified exchange or other market, such stock generally will be “regularly traded” for any calendar year during which such stock is traded, other than in de minimis quantities, on at least 15 days during each calendar quarter. Each U.S. Holder should consult its own tax advisor in this matter.

A U.S. Holder that makes a Mark-to-Market Election with respect to its Offered Shares generally will not be subject to the rules of Section 1291 of the Code discussed above with respect to such Offered Shares. However, if a U.S. Holder does not make a Mark-to-Market Election beginning in the first tax year of such U.S. Holder’s holding period for the Offered Shares for which we are a PFIC and such U.S. Holder has not made a timely QEF Election, the rules of Section 1291 of the Code discussed above will apply to certain dispositions of, and distributions on, the Offered Shares.

Any Mark-to-Market Election made by a U.S. Holder for the Offered Shares will also apply to such U.S. Holder’s Warrant Shares. As a result, if a Mark-to-Market Election has been made by a U.S. Holder with respect to Offered Shares, any Warrant Shares received will automatically be marked-to-market in the year of exercise. Because, under the proposed Treasury Regulations, a U.S. Holder’s holding period for Warrant Shares includes the period during which such U.S. Holder held the Warrants, a U.S. Holder will be treated as making a Mark-to-Market Election with respect to its Warrant Shares after the beginning of such U.S. Holder’s holding period for the Warrant Shares unless the Warrant Shares are acquired in the same tax year as the year in which the U.S. Holder acquired its Offered Share Units or Pre-Funded Warrant Units, as applicable. Consequently, the default rules under Section 1291 described above generally will apply to the mark-to-market gain realized in the tax year in which Warrant Shares are received upon the exercise of the Warrants. However, the general mark-to-market rules will apply to subsequent tax years.

Table of Contents

Any Mark-to-Market Election made by a U.S. Holder for the Offered Shares will also apply to such U.S. Holder's Offered Shares received upon exercise of a Pre-Funded Warrant. As a result, if a Mark-to-Market Election has been made by a U.S. Holder with respect to Offered Shares, any Offered Shares received upon exercise of a Pre-Funded Warrant will automatically be marked-to-market in the year of exercise. Because a U.S. Holder's holding period for Offered Shares received upon exercise of a Pre-Funded Warrant should include the period during which such U.S. Holder held the Pre-Funded Warrant, a U.S. Holder will be treated as making a Mark-to-Market Election with respect to such Offered Shares after the beginning of such U.S. Holder's holding period for such Offered Shares unless such Offered Shares are acquired in the same tax year as the year in which the U.S. Holder acquired its Pre-Funded Warrant Units. Consequently, the default rules under Section 1291 described above generally will apply to the mark-to-market gain realized in the tax year in which such Offered Shares are received upon the exercise of the Pre-Funded Warrants. However, the general mark-to-market rules will apply to subsequent tax years.

A U.S. Holder that makes a Mark-to-Market Election will include in ordinary income, for each tax year in which we are a PFIC, an amount equal to the excess, if any, of (a) the fair market value of the Offered Shares and any Warrant Shares, as of the close of such tax year over (b) such U.S. Holder's adjusted tax basis in such Offered Shares and any Warrant Shares. A U.S. Holder that makes a Mark-to-Market Election will be allowed a deduction in an amount equal to the excess, if any, of (a) such U.S. Holder's adjusted tax basis in the Offered Shares and any Warrant Shares, over (b) the fair market value of such Offered Shares and any Warrant Shares (but only to the extent of the net amount of previously included income as a result of the Mark-to-Market Election for prior tax years).

A U.S. Holder that makes a Mark-to-Market Election generally also will adjust such U.S. Holder's tax basis in the Offered Shares and Warrant Shares to reflect the amount included in gross income or allowed as a deduction because of such Mark-to-Market Election. In addition, upon a sale or other taxable disposition of Offered Shares and Warrant Shares, a U.S. Holder that makes a Mark-to-Market Election will recognize ordinary income or ordinary loss (not to exceed the excess, if any, of (a) the amount included in ordinary income because of such Mark-to-Market Election for prior tax years over (b) the amount allowed as a deduction because of such Mark-to-Market Election for prior tax years). Losses that exceed this limitation are subject to the rules generally applicable to losses provided in the Code and Treasury Regulations.

A U.S. Holder makes a Mark-to-Market Election by attaching a completed IRS Form 8621 to a timely filed United States federal income tax return. A Mark-to-Market Election applies to the tax year in which such Mark-to-Market Election is made and to each subsequent tax year, unless the Offered Shares and Warrant Shares cease to be "marketable stock" or the IRS consents to revocation of such election. Each U.S. Holder should consult its own tax advisors regarding the availability of, and procedure for making, a Mark-to-Market Election.

Although a U.S. Holder may be eligible to make a Mark-to-Market Election with respect to the Offered Shares and Warrant Shares, no such election may be made with respect to the stock of any Subsidiary PFIC that a U.S. Holder is treated as owning, because such stock is not marketable. Hence, the Mark-to-Market Election will not be effective to eliminate the interest charge and other income inclusion rules described above with respect to deemed dispositions of Subsidiary PFIC stock or distributions from a Subsidiary PFIC to its shareholder.

Other PFIC Rules

Under Section 1291(f) of the Code, the IRS has issued proposed Treasury Regulations that, subject to certain exceptions, would cause a U.S. Holder that had not made a timely QEF Election to recognize gain (but not loss) upon certain transfers of Offered Shares, Pre-Funded Warrants, Warrants and Warrant Shares that would otherwise be tax-deferred (e.g., gifts and exchanges pursuant to corporate reorganizations). However, the specific U.S. federal income tax consequences to a U.S. Holder may vary based on the manner in which Offered Shares, Pre-Funded Warrants, Warrants, and Warrant Shares are transferred.

If finalized in their current form, the proposed Treasury Regulations applicable to PFICs would be effective for transactions occurring on or after April 1, 1992. Because the proposed Treasury Regulations have not yet been adopted in final form, they are not currently effective, and there is no assurance that they will be adopted in the form and with the effective date proposed. Nevertheless, the IRS has announced that, in the absence of final Treasury Regulations, taxpayers may apply reasonable interpretations of the Code provisions applicable to PFICs and that it considers the rules set forth in the proposed Treasury Regulations to be reasonable interpretations of those Code provisions. The PFIC rules are complex, and the implementation of certain aspects of the PFIC rules requires the issuance of Treasury Regulations which in many instances have not been promulgated and which, when promulgated, may have retroactive effect. U.S. Holders should consult their own tax advisors about the potential applicability of the proposed Treasury Regulations.

[Table of Contents](#)

Certain additional adverse rules may apply with respect to a U.S. Holder if we are a PFIC, regardless of whether such U.S. Holder makes a QEF Election. For example, under Section 1298(b)(6) of the Code, a U.S. Holder that uses Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares as security for a loan will, except as may be provided in Treasury Regulations, be treated as having made a taxable disposition of such Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares.

In addition, a U.S. Holder who acquires Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares from a decedent will not receive a “step up” in tax basis of such Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares to fair market value unless such decedent had a timely and effective QEF Election in place.

Special rules also apply to the amount of foreign tax credit that a U.S. Holder may claim on a distribution from a PFIC. Subject to such special rules, foreign taxes paid with respect to any distribution in respect of stock in a PFIC are generally eligible for the foreign tax credit. The rules relating to distributions by a PFIC and their eligibility for the foreign tax credit are complicated, and a U.S. Holder should consult with its own tax advisors regarding the availability of the foreign tax credit with respect to distributions by a PFIC.

The PFIC rules are complex, and each U.S. Holder should consult its own tax advisors regarding the PFIC rules (including the availability and advisability of making a QEF Election or Mark-to-Market Election) and how the PFIC rules may affect the U.S. federal income tax consequences of the acquisition, ownership, and disposition of Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares.

Certain additional adverse rules may apply with respect to a U.S. Holder if we are a PFIC, regardless of whether the U.S. Holder makes a QEF Election. These rules include special rules that apply to the amount of foreign tax credit that a U.S. Holder may claim on a distribution from a PFIC. Subject to these special rules, foreign taxes paid with respect to any distribution in respect of stock in a PFIC are generally eligible for the foreign tax credit. U.S. Holders are urged to consult their own tax advisors regarding the potential application of the PFIC rules to the ownership and disposition of Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares, and the availability of certain U.S. tax elections under the PFIC rules.

U.S. Federal Income Tax Consequences of the Exercise and Disposition of Warrants

The following discussion describes the general rules applicable to the ownership and disposition of the Warrants but is subject in its entirety to the special rules described above under the heading “*Passive Foreign Investment Company Rules.*”

Exercise of Warrants

A U.S. Holder should not recognize gain or loss on the exercise of a Warrant and related receipt of a Warrant Share (unless cash is received in lieu of the issuance of a fractional Warrant Share). A U.S. Holder’s initial tax basis in the Warrant Share received on the exercise of a Warrant should be equal to the sum of (a) such U.S. Holder’s tax basis in such Warrant plus (b) the exercise price paid by such U.S. Holder on the exercise of such Warrant. It is unclear whether a U.S. Holder’s holding period for the Warrant Share received on the exercise of a Warrant would commence on the date of exercise of the Warrant or the day following the date of exercise of the Warrant. If we are a PFIC, a U.S. Holder’s holding period for the Warrant Share for PFIC purposes will begin on the date on which such U.S. Holder acquired its Offered Share Units or Pre-Funded Warrant Units, as applicable.

In certain limited circumstances, a U.S. Holder may be permitted to undertake a cashless exercise of Warrants into Warrant Shares. The U.S. federal income tax treatment of a cashless exercise of Warrants into Warrant Shares is unclear, and the tax consequences of a cashless exercise could differ from the consequences upon the exercise of a Warrant described in the preceding paragraph. U.S. Holders should consult their own tax advisors regarding the U.S. federal income tax consequences of a cashless exercise of Warrants.

Table of Contents

Disposition of Warrants

A U.S. Holder will recognize gain or loss on the sale or other taxable disposition of a Warrant in an amount equal to the difference, if any, between (a) the amount of cash plus the fair market value of any property received and (b) such U.S. Holder's tax basis in the Warrant sold or otherwise disposed of. Subject to the PFIC rules discussed above, any such gain or loss generally will be a capital gain or loss, which will be long-term capital gain or loss if the Warrant is held for more than one year. Deductions for capital losses are subject to complex limitations under the Code.

Expiration of Warrants Without Exercise

Upon the lapse or expiration of a Warrant, a U.S. Holder will recognize a loss in an amount equal to such U.S. Holder's tax basis in the Warrant. Any such loss generally will be a capital loss and will be long-term capital loss if the Warrants are held for more than one year. Deductions for capital losses are subject to complex limitations under the Code.

Certain Adjustments to the Warrants

Under Section 305 of the Code, an adjustment to the number of Warrant Shares that will be issued on the exercise of the Warrants, or an adjustment to the exercise price of the Warrants, may be treated as a constructive distribution to a U.S. Holder of the Warrants if, and to the extent that, such adjustment has the effect of increasing such U.S. Holder's proportionate interest in the "earnings and profits" or our assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to the shareholders). Adjustments to the exercise price of Warrants made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders of the Warrants should generally not be considered to result in a constructive distribution. Any such constructive distribution would be taxable whether or not there is an actual distribution of cash or other property. (See more detailed discussion of the rules applicable to distributions made by us at "*Distributions on Offered Shares, Pre-Funded Warrants and Warrant Shares*" below).

General Rules Applicable to the Ownership and Disposition of Offered Shares, Pre-Funded Warrants and Warrant Shares

The following discussion is subject, in its entirety, to the rules described above under the heading "*Passive Foreign Investment Company Rules*".

Distributions on Offered Shares, Pre-Funded Warrants and Warrant Shares

A U.S. Holder that receives a distribution, including a constructive distribution, with respect to an Offered Share, Pre-Funded Warrant or Warrant Share (as well as any constructive distribution on a Warrant) will be required to include the amount of such distribution in gross income as a dividend (without reduction for any Canadian income tax withheld from such distribution) to the extent of our current or accumulated "earnings and profits", as computed for U.S. federal income tax purposes. A dividend generally will be taxed to a U.S. Holder at ordinary income tax rates if we are a PFIC for the tax year of such distribution or were a PFIC for the preceding tax year. To the extent that a distribution exceeds our current and accumulated "earnings and profits", such distribution will be treated first as a tax-free return of capital to the extent of a U.S. Holder's tax basis in the Offered Shares, Pre-Funded Warrants or Warrant Shares and thereafter as gain from the sale or exchange of such Offered Shares, Pre-Funded Warrants or Warrant Shares. (See "*Sale or Other Taxable Disposition of Offered Shares, Pre-Funded Warrants and/or Warrant Shares*" below). However, we do not intend to maintain the calculations of our earnings and profits in accordance with U.S. federal income tax principles, and each U.S. Holder therefore should assume that any distribution by us with respect to Offered Shares, Pre-Funded Warrants or Warrant Shares will constitute ordinary dividend income. Dividends received on Offered Shares, Pre-Funded Warrants or Warrant Shares by corporate U.S. Holders generally will not be eligible for the "dividends received deduction" generally applicable to corporations. Subject to applicable limitations and provided we are eligible for the benefits of the Canada-U.S. Tax Treaty or the Offered Shares are readily tradable on a United States securities market, dividends paid by us to non-corporate U.S. Holders, including individuals, in respect of Offered Shares, Pre-Funded Warrants or Warrant Shares generally will be eligible for the preferential tax rates applicable to long-term capital gains for dividends, provided certain holding period and other conditions are satisfied, including that we not be classified as a PFIC in the tax year of distribution or in the preceding tax year. The dividend rules are complex, and each U.S. Holder should consult its own tax advisors regarding the application of such rules.

Table of Contents

Sale or Other Taxable Disposition of Offered Shares, Pre-Funded Warrants and/or Warrant Shares

Upon the sale or other taxable disposition of Offered Shares, Pre-Funded Warrants or Warrant Shares, a U.S. Holder generally will recognize capital gain or loss in an amount equal to the difference between the U.S. dollar value of cash received plus the fair market value of any property received and such U.S. Holder's tax basis in such Offered Shares, Pre-Funded Warrants or Warrant Shares sold or otherwise disposed of. Gain or loss recognized on such sale or other taxable disposition generally will be long-term capital gain or loss if, at the time of the sale or other taxable disposition, the Offered Shares, Pre-Funded Warrants or Warrant Shares have been held for more than one year.

Preferential tax rates may apply to long-term capital gain of a U.S. Holder that is an individual, estate, or trust. There are currently no preferential tax rates for long-term capital gain of a U.S. Holder that is a corporation. Deductions for capital losses are subject to significant limitations under the Code.

Additional Considerations

Receipt of Foreign Currency

The amount of any distribution paid to a U.S. Holder in foreign currency, or on the sale, exchange or other taxable disposition of Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares generally will be equal to the U.S. dollar value of such foreign currency based on the exchange rate applicable on the date of receipt (regardless of whether such foreign currency is converted into U.S. dollars at that time). A U.S. Holder will have a tax basis in the foreign currency equal to its U.S. dollar value on the date of receipt. Any U.S. Holder who converts or otherwise disposes of the foreign currency after the date of receipt may have a foreign currency exchange gain or loss that would be treated as ordinary income or loss, and generally will be U.S. source income or loss for foreign tax credit purposes. Different rules apply to U.S. Holders who use the accrual method of tax accounting. Each U.S. Holder should consult its own U.S. tax advisors regarding the U.S. federal income tax consequences of receiving, owning, and disposing of foreign currency.

Foreign Tax Credit

Dividends paid on the Offered Shares, Pre-Funded Warrants, or Warrant Shares (or constructive dividends on the Warrants) will be treated as foreign-source income, and generally will be treated as "passive category income" or "general category income" for U.S. foreign tax credit purposes. Any gain or loss recognized on a sale or other disposition of Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares generally will be United States source gain or loss. Certain U.S. Holders that are eligible for the benefits of Canada-U.S. Tax Treaty may elect to treat such gain or loss as Canadian source gain or loss for U.S. foreign tax credit purposes. The Code applies various complex limitations on the amount of foreign taxes that may be claimed as a credit by U.S. taxpayers. In addition, Treasury Regulations that apply to foreign taxes paid or accrued (the "Foreign Tax Credit Regulations") impose additional requirements for Canadian withholding taxes to be eligible for a foreign tax credit, and there can be no assurance that those requirements will be satisfied. The Treasury Department has recently released guidance temporarily pausing the application of certain of the Foreign Tax Credit Regulations.

Subject to the PFIC rules and the Foreign Tax Credit Regulations, each as discussed above, a U.S. Holder that pays (whether directly or through withholding) Canadian income tax with respect to dividends paid on the Offered Shares, Pre-Funded Warrants or Warrant Shares (or constructive dividends on the Warrants) generally will be entitled, at the election of such U.S. Holder, to receive either a deduction or a credit for such Canadian income tax. Generally, a credit will reduce a U.S. Holder's U.S. federal income tax liability on a dollar-for-dollar basis, whereas a deduction will reduce a U.S. Holder's income that is subject to U.S. federal income tax. This election is made on a year-by-year basis and applies to all foreign taxes paid (whether directly or through withholding) by a U.S. Holder during a year. The foreign tax credit rules are complex and involve the application of rules that depend on a U.S. Holder's particular circumstances. Accordingly, each U.S. Holder should consult its own U.S. tax advisor regarding the foreign tax credit rules.

Table of Contents

Backup Withholding and Information Reporting

Under U.S. federal income tax law and Treasury Regulations, certain categories of U.S. Holders must file information returns with respect to their investment in, or involvement in, a foreign corporation. For example, U.S. return disclosure obligations (and related penalties) are imposed on individuals who are U.S. Holders that hold certain specified foreign financial assets in excess of certain threshold amounts. The definition of specified foreign financial assets includes not only financial accounts maintained in foreign financial institutions, but also, unless held in accounts maintained by a financial institution, any stock or security issued by a non-U.S. person, any financial instrument or contract held for investment that has an issuer or counterparty other than a U.S. person and any interest in a non-U.S. entity. U.S. Holders may be subject to these reporting requirements unless their Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares are held in an account at certain financial institutions. Penalties for failure to file certain of these information returns are substantial. U.S. Holders should consult their own tax advisors regarding the requirements of filing information returns, including the requirement to file an IRS Form 8938.

Payments made within the U.S. or by a U.S. payor or U.S. middleman, of dividends on, and proceeds arising from the sale or other taxable disposition of Offered Shares, Pre-Funded Warrants, Warrants or Warrant Shares will generally be subject to information reporting and backup withholding tax (currently at a rate of 24%) if a U.S. Holder (a) fails to furnish such U.S. Holder's correct U.S. taxpayer identification number (generally on IRS Form W-9), (b) furnishes an incorrect U.S. taxpayer identification number, (c) is notified by the IRS that such U.S. Holder has previously failed to properly report items subject to backup withholding tax, or (d) fails to certify, under penalty of perjury, that such U.S. Holder has furnished its correct U.S. taxpayer identification number and that the IRS has not notified such U.S. Holder that it is subject to backup withholding tax. However, certain exempt persons generally are excluded from these information reporting and backup withholding rules. Backup withholding is not an additional tax. Any amounts withheld under the U.S. backup withholding tax rules will be allowed as a credit against a U.S. Holder's U.S. federal income tax liability, if any, or will be refunded, if such U.S. Holder furnishes required information to the IRS in a timely manner.

The discussion of reporting requirements set forth above is not intended to constitute a complete description of all reporting requirements that may apply to a U.S. Holder. A failure to satisfy certain reporting requirements may result in an extension of the time period during which the IRS can assess a tax, and under certain circumstances, such an extension may apply to assessments of amounts unrelated to any unsatisfied reporting requirement. Each U.S. Holder should consult its own tax advisors regarding the information reporting and backup withholding rules.

THE ABOVE SUMMARY IS NOT INTENDED TO CONSTITUTE A COMPLETE ANALYSIS OF ALL TAX CONSIDERATIONS APPLICABLE TO U.S. HOLDERS WITH RESPECT TO THE ACQUISITION, OWNERSHIP AND DISPOSITION OF OFFERED SHARE UNITS, PRE-FUNDED UNITS, OFFERED SHARES, PRE-FUNDED WARRANTS, WARRANTS, AND WARRANT SHARES. U.S. HOLDERS SHOULD CONSULT THEIR OWN TAX ADVISORS AS TO THE TAX CONSIDERATIONS APPLICABLE TO THEM IN LIGHT OF THEIR OWN PARTICULAR CIRCUMSTANCES.

DESCRIPTION OF OUR COMMON SHARES

The following description of the common shares summarizes the material terms and provisions thereof.

Authorized Capital

Our authorized share capital consists of an unlimited number of common shares, no par value, of which 7,942,363 were issued and outstanding as at November 30, 2023. None of our common shares are held by us or on our behalf.

Common Shares

The holders of our common shares are entitled to receive notice of and to attend and vote at all annual and special meetings of our shareholders. Our common shares carry one vote per common share and do not have cumulative voting rights. The holders of our common shares are entitled, at the discretion of our board of directors, to receive out of any or all of our profits or surplus properly available for the payment of dividends, any dividend declared by the board of directors and payable by us on our common shares. The holders of our common shares will participate on a pro rata basis in any distribution of our remaining property upon our liquidation, dissolution or winding-up or any other return of capital or distribution of our assets among our shareholders for the purpose of winding up our affairs.

Dividend Policy

We have not paid any dividends since our incorporation. At the discretion of our board of directors, we will consider paying dividends in the future as our operational circumstances may permit, having regard to, among other things, our earnings, cash flow and financial requirements. It is the current policy of our board of directors to retain all earnings to finance our business plan.

Listings

Our common shares are listed on Nasdaq under the symbol "APTO" and on the TSX under the symbol "APS".

DESCRIPTION OF OUR SECURITIES WE ARE OFFERING

We are offering 4,098,361 Offered Shares, together with Warrants to purchase up to 4,098,361 Offered Shares. Each Warrant has an assumed exercise price of \$2.44 per Offered Share, which is the last reported sale price of our common shares on Nasdaq on November 30, 2023. The Offered Shares and the Warrants are immediately separable and will be issued separately, but must be purchased together in this offering. We are also offering Pre-Funded Warrants to purchase up to 4,098,361 Offered Shares to those purchasers whose purchase of Offered Shares in this offering would result in the purchaser beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common shares following the consummation of this offering in lieu of the Offered Shares that would result in ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%). Each Pre-Funded Warrant will be exercisable for one Offered Share at an exercise price of \$0.01 per Offered Share. Each Pre-Funded Warrant is being issued together with the same Warrants described above being issued with each Offered Share. The Pre-Funded Warrants and Warrants are immediately separable and will be issued separately in this offering, but must be purchased together in this offering. For each Pre-Funded Warrant and accompanying Warrant we sell, the number of Offered Shares and accompanying Warrants we are offering will be decreased on a one-for-one basis.

Offered Shares

The material terms and provisions of our common shares are described under the section titled “Description of our Common Shares” on page 33.

Pre-Funded Warrants

The following summary of certain terms and provisions of the Pre-Funded Warrants that are being issued hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Pre-Funded Warrant, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Pre-Funded Warrant for a complete description of the terms and conditions of the Pre-Funded Warrants.

Duration and Exercise Price

Each Pre-Funded Warrant offered hereby will have an initial exercise price per Offered Share equal to \$0.01. Each Pre-Funded Warrant will be exercisable immediately upon issuance until the Pre-Funded Warrant is exercised in full. We may at any time during the term of each Pre-Funded Warrant reduce the then current exercise price to any amount and for any period of time deemed appropriate by our board of directors. The exercise price and number of Offered Shares issuable upon exercise is subject to appropriate adjustment in the event of stock splits and combinations affecting our Offered Shares. The Pre-Funded Warrants and Warrants are immediately separable and will be issued separately but must be purchased together in this offering.

Exercisability

The Pre-Funded Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of Offered Shares purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the Pre-Funded Warrant to the extent that the holder would beneficially own (as determined in accordance with the terms of the Pre-Funded Warrants and the rules and regulations of the SEC) more than 4.99% (or, at the election of the purchaser, 9.99%) of the outstanding Offered Shares immediately after exercise, or the maximum percentage, except that upon at least 61 days' prior notice from the holder to us, the holder may increase or decrease the maximum percentage, provided that the maximum percentage cannot be increased to more than 9.99% and any increase does not take effect for 61 days after such notice is delivered.

Table of Contents

Cashless Exercise

In lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of Offered Shares determined according to a formula set forth in the Pre-Funded Warrants.

Transferability

Subject to applicable laws, a Pre-Funded Warrant may be transferred at the option of the holder upon surrender of the Pre-Funded Warrant to us together with the appropriate instruments of transfer.

Fractional Shares

No fractional Offered Shares will be issued upon the exercise of the Pre-Funded Warrants. Rather, the number of Offered Shares to be issued will be rounded to the nearest whole number.

Trading Market

There is no trading market available for the Pre-Funded Warrants on any securities exchange or nationally recognized trading system, and we do not expect a trading market to develop. We do not intend to list the Pre-Funded Warrants on any securities exchange or other trading market. Without a trading market, the liquidity of the Pre-Funded Warrants will be extremely limited. The Offered Shares issuable upon exercise of the Pre-Funded Warrants are currently listed on Nasdaq. We have applied to list the Offered Shares issuable upon exercise of the Pre-Funded Warrants on the TSX.

Right as a Shareholder

Except as otherwise provided in the Pre-Funded Warrants or by virtue of such holder's ownership of Offered Shares, the holders of the Pre-Funded Warrants do not have the rights or privileges of holders of our common shares, including any voting rights, until they exercise their Pre-Funded Warrants. The Pre-Funded Warrants provide that holders have the right to participate in distributions or dividends paid on our Offered Shares.

Fundamental Transaction

In the event we are subject to a Fundamental Transaction (as such term is defined in the form of Pre-Funded Warrant), then we will not enter into or be a party to the Fundamental Transaction unless the successor entity assumes in writing all of the obligations of the Company under the Pre-Funded Warrant. If the Fundamental Transaction is a Change of Control (as such term is defined in the form of Pre-Funded Warrant), at the request of the holder delivered no later than 30 days after the closing of such Change of Control, we or the successor entity shall purchase the Pre-Funded Warrant for an amount equal to the Black Scholes Value (as defined in the Pre-Funded Warrant) of the unexercised portion of the Pre-Funded Warrant on the effective date of the Change of Control. Such purchase shall be payable in cash unless the Change of Control is not within our control, including not having been approved by our board of directors, in which case the holder shall be entitled to receive the same type or form of consideration (and in the same proportion) at the Black Scholes Value of the unexercised portion of the Pre-Funded Warrant, that is being offered and paid to the holders of Offered Shares.

Warrants to Purchase Offered Shares

The following summary of certain terms and provisions of the Warrants is not complete and is subject to, and qualified in its entirety by, the provisions of the Warrants, the form of which is filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Warrant for a complete description of the terms and conditions of the Warrants.

Duration and Exercise Price

Each Warrant offered hereby has an assumed initial exercise price equal to \$2.44 per Offered Share, which is the last reported sale price of our common shares on Nasdaq on November 30, 2023. The Warrants will be exercisable immediately upon issuance and will expire five years from the date of issuance. We may at any time during the term of each Warrant reduce the then current exercise price to any amount and for any period of time deemed appropriate by our board of directors. The exercise price and number of Offered Shares issuable upon exercise is subject to appropriate adjustment in the event of stock splits and combinations affecting our Offered Shares. The Warrants will be issued separately from the Offered Shares, or the Pre-Funded Warrants, as the case may be.

Table of Contents

Exercisability

The Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of Offered Shares purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the Warrant to the extent that the holder would beneficially own more than the maximum percentage, except that upon prior notice from the holder to us, the holder may increase or decrease the maximum percentage, provided that the maximum percentage cannot be increased to more than 9.99% and any increase does not take effect for 61 days after such notice is delivered.

Cashless Exercise

If, at the time a holder exercises its Warrants, a registration statement registering the issuance of the Offered Shares underlying the Warrants or the resale of such shares under the Securities Act is not then effective or available for the issuance or resale, as applicable, of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of Offered Shares determined according to a formula set forth in the Warrants.

Fractional Shares

No fractional Offered Shares will be issued upon the exercise of the Warrants. Rather, the number of Offered Shares to be issued will be rounded to the nearest whole number.

Transferability

Subject to applicable laws, a Warrant may be transferred at the option of the holder upon surrender of the Warrant to us together with the appropriate instruments of transfer.

Trading Market

There is no trading market available for the Warrants on any securities exchange or nationally recognized trading system, and we do not expect a trading market to develop. We do not intend to list the Warrants on any securities exchange or other trading market. Without a trading market, the liquidity of the Warrants will be extremely limited. Our common shares are currently listed on Nasdaq. We have applied to list the Offered Shares issuable upon exercise of the Warrants on the TSX.

Right as a Shareholder

Except as otherwise provided in the Warrants or by virtue of such holder's ownership of Offered Shares, the holders of the Warrants do not have the rights or privileges of holders of our Offered Shares, including any voting rights, until they exercise their Warrants.

Fundamental Transaction

In the event we are subject to a Fundamental Transaction (as such term is defined in the form of Warrant), then we will not enter into or be a party to the Fundamental Transaction unless the successor entity assumes in writing all of the obligations of the Company under the Warrant. If the Fundamental Transaction is a Change of Control (as such term is defined in the form of Warrant), at the request of the holder delivered no later than 30 days after the closing of such Change of Control, we or the successor entity shall purchase the Warrant for an amount equal to the Black Scholes Value (as defined in the Warrant) of the unexercised portion of the Warrant on the effective date of the Change of Control. Such purchase shall be payable in cash unless the Change of Control is not within our control, including not having been approved by our board of directors, in which case the holder shall be entitled to receive the same type or form of consideration (and in the same proportion) at the Black Scholes Value of the unexercised portion of the Warrant, that is being offered and paid to the holders of Offered Shares.

Table of Contents*U.S. Tax Consequences*

In the event of an adjustment (or nonoccurrence of an adjustment) to the exercise price or the number of Offered Shares or other consideration for which a Warrant or Pre-Funded Warrant may be exercised, the holders of the Warrants or Pre-Funded Warrants may, in certain circumstances, be deemed to have received a distribution subject to U.S. federal income tax as a dividend. See “Material U.S. Federal Income Tax Consequences.” Because this deemed income would not give rise to any cash from which any applicable withholding tax could be satisfied, if withholding taxes (including backup withholding taxes) are paid on behalf of a holder, those withholding taxes may be set off against any cash or shares received pursuant to the Warrants or Pre-Funded Warrants (or, in some circumstances, against any payments on the Offered Shares).

**DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT
LIABILITIES**

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

LEGAL MATTERS

The validity of the securities being offered hereby is being passed upon for us by McCarthy Tétrault LLP, Toronto, Ontario, with respect to matters of Canadian law and Dorsey & Whitney LLP, Vancouver, British Columbia and Denver, Colorado with respect to matters of U.S. law. Certain legal matters will be passed upon for the underwriters by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

EXPERTS

The consolidated financial statements of Aptose Biosciences Inc. as of December 31, 2022 and 2021, and for each of the years then ended, have been incorporated by reference from our Annual Report on Form 10-K as filed with the SEC on March 24, 2023, in reliance upon the report of KPMG LLP, an independent registered public accounting firm. Such report is incorporated by reference upon the authority of said firm as experts in accounting and auditing. The audit report covering the December 31, 2022 consolidated financial statements contains an explanatory paragraph that states that the Company's recurring losses from operations and net capital deficiency raise substantial doubt about the entity's ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of that uncertainty.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Securities Exchange Act of 1934 and, accordingly, we file reports with and furnish other information to the SEC. This prospectus forms part of a registration statement we have filed with the SEC relating to, among other things, the Offered Shares. As permitted by SEC rules, this prospectus does not contain all of the information contained in the registration statement that we filed. For further information regarding us and the securities covered by this prospectus, you may desire to review the full registration statement, including its exhibits. The registration statement, including its exhibits, as well as the documents that we file with the SEC, may be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling 1-800-SEC-0330. Copies of such materials are also available by mail from the Public Reference Branch of the SEC at 100 F Street, N.E., Washington, D.C. 20549 at prescribed rates. In addition, the SEC maintains a website (<http://www.sec.gov>) from which interested persons can electronically access the registration statement, including the exhibits to the registration statement.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information we file with the SEC. This means that we can disclose important information to you by referring you to those documents.

We incorporate by reference into this prospectus the documents listed below:

Table of Contents

- Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2022 filed with the SEC on March 24, 2023;
- Quarterly Reports on Form 10-Q filed with the SEC on [May 8, 2023](#), [August 10, 2023](#) and [November 9, 2023](#);
- Our definitive proxy statement on [Schedule 14A](#) filed on April 19, 2023;
- Our Current Reports on Form 8-K filed with the SEC on [January 6, 2023](#), [May 23, 2023](#), [May 26, 2023](#), [June 5, 2023](#), [June 12, 2023](#), [June 26, 2023](#), [September 12, 2023](#) (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits that are related to such item); and

The description of our common shares set forth under the heading “Additional Information - Common Shares” contained in our Annual Report on Form 20-F for the fiscal year end May 31, 2014, filed with the SEC on [July 30, 2014](#), and incorporated by reference into our Registration Statement on Form 8-A, as filed with the SEC on [October 21, 2014](#), including any amendment or report to such Registration Statement on Form 8-A filed for the purpose of amending such description.

In addition, all documents filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, after the date of this prospectus but before the termination of the offering of the securities covered by this prospectus, are hereby incorporated by reference into this prospectus.

We have not authorized anyone to provide you with any different or additional information other than that contained in or incorporated by reference into this prospectus. We take no responsibility for, and can provide no assurance as to the reliability of, any information that others may provide.

Any statement contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

The documents incorporated by reference into this prospectus are available from us upon request. We will provide a copy of any and all of the information that is incorporated by reference into this prospectus to any person, including a beneficial owner, to whom a prospectus is delivered, without charge, upon written or oral request. If exhibits to the documents incorporated by reference into this prospectus are not themselves specifically incorporated by reference in this prospectus, then the exhibits will not be provided.

Requests for any of these documents should be directed to:

Investor Relations
Aptose Biosciences Inc.
251 Consumers Road, Suite 1105
Toronto, Ontario, Canada M2J 4R3
(647) 479-9828

4,098,361 Common Shares

Pre-Funded Warrants to Purchase up to 4,098,361 Common Shares

Warrants to Purchase 4,098,361 Common Shares



PROSPECTUS

Sole Book-Running Manager

Oppenheimer & Co.

, 2023

PART II
INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all expenses to be paid by the Company, other than underwriting discounts and commissions, upon the completion of this offering. All amounts shown are estimates except for the SEC filing fee.

	Approximate Amount
SEC registration fee	\$ 2,952
Legal fees and expenses	
Accounting fees and expenses	
Transfer agent and registrar fees	
Miscellaneous	
Total	<u>\$</u>

Item 14. Indemnification of Directors and Officers.

Under the *Canada Business Corporations Act*, or the “CBCA”, the Company may indemnify its current or former directors or officers or another individual who acts or acted at the Company’s request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of his or her association with the Company or another entity, and the individual seeking indemnity shall have a right to such indemnity if such individual was not judged by the court or other competent authority to have committed any fault or omitted to do anything that such individual ought to have done. The CBCA also provides that the Company may advance moneys to such an individual for the costs, charges and expenses of such a proceeding.

The CBCA also provides that the Company may with the approval of a court, indemnify such an individual or advance moneys against all costs, charges and expenses reasonably incurred by the individual in connection with an action by or on behalf of the Company or other entity to procure a judgment in its favour, to which the individual is made a party because of the individual’s association with the Company or other entity at the Company’s request.

However, indemnification under any of the foregoing circumstances is prohibited under the CBCA unless the individual:

- acted honestly and in good faith with a view to the Company’s best interests, or the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at the Company’s request; and
- in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that his or her conduct was lawful.

The Company’s by-law No. 2 provides that the Company will indemnify its directors or officers, former directors or officers or other individuals who act or have acted at the Company’s request as a director or officer, or in a similar capacity, of another entity, and his or her heirs and legal representatives to the extent permitted by the CBCA.

The Company’s by-law No. 2 further provides that, except as otherwise required by the CBCA, the Company may from time to time indemnify and save harmless any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Company) by reason of the fact that he or she is or was an employee or agent of the Company, or is or was serving at the request of the Company as an employee, agent of or participant in another entity against expenses (including legal fees), judgments, fines and any amount actually and

Table of Contents

reasonably incurred by him or her in connection with such action, suit or proceeding if he or she acted honestly and in good faith with a view to the best interests of the Company or, as the case may be, to the best interests of the other entity for which he or she served at the Company's request and, with respect to any criminal or administrative action or proceeding that is enforced by a monetary penalty, had reasonable grounds for believing that his or her conduct was lawful. The termination of any action, suit or proceeding by judgment, order, settlement or conviction will not, of itself, create a presumption that the person did not act honestly and in good faith with a view to the best interests of the Company or other entity and, with respect to any criminal or administrative action or proceeding that is enforced by a monetary penalty, had no reasonable grounds for believing that his or her conduct was lawful.

The Company has entered into indemnity agreements with its directors and certain officers pursuant to which it has agreed to indemnify its officers and directors for:

- (a) all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by them in respect of any civil, criminal or administrative action or proceeding to which they are made a party by reason of being or having been a director and/or officer of the Company, if (i) they acted honestly and in good faith with a view to the best interests of the Company, and (ii) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, they had reasonable grounds for believing that their conduct was lawful.
- (b) all costs, charges and expenses reasonably incurred by them in connection with any action by or on behalf of the Company to procure a judgment in the Company's favour to which they are made a party by reason of being or having been a director and/or officer of the Company.
- (c) all costs, charges and expenses reasonably incurred by them in connection with the defense of any civil, criminal or administrative proceeding to which they are made a party by reason of being or having been a director and/or officer of the Company if they have been substantially successful on the merits in their defense of the action or proceeding and they fulfil the conditions set forth in the two foregoing clauses (a)(i) and (a)(ii) above.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or persons controlling the Company pursuant to the foregoing provisions, the Company has been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is therefore unenforceable.

Item 15. Recent Sales of Unregistered Securities.

The Company sold the securities described below within the past three years which were not registered under the Securities Act.

On May 25, 2023, the Company entered into Purchase Agreement with Keystone Capital Partners, LLC ("Keystone"), pursuant to which Keystone has committed to purchase from the Company, at the Company's direction, up to \$25 million common shares, subject to the terms and conditions specified in such purchase agreement. Pursuant to the Purchase Agreement, the Company issued to Keystone 7,547 Initial Commitment Shares concurrently with the Company's execution of the Purchase Agreement as consideration for its irrevocable commitment to purchase the common shares thereunder, subject the terms and conditions contained therein. In the nine months ended September 30, 2023, the Company's issuance of common shares to Keystone comprised 328,438 common shares. The securities were issued pursuant to an exemption from registration provided for under Section 4(a)(2) of the Securities Act. The Company relied on this exemption from registration based in part on representations made by the investor.

On September 6, 2023, the Company entered into a subscription agreement (the "Subscription Agreement") with Hanmi Pharmaceutical Co., Ltd., a corporation formed under the laws of the Republic of Korea ("Hanmi Pharmaceutical"), pursuant to which the Company agreed to sell and issue to Hanmi Pharmaceutical and Hanmi Pharmaceutical agreed to purchase from the Company up to \$7.0 million of our common shares, at a purchase price per common share of \$4.448 (the "Purchase Price"), which represents a premium to the Nasdaq "Minimum Price" as defined under Rule 5635(d)(1)(A) under Nasdaq's Listing Rules of \$4.04 per common share for aggregate gross

Table of Contents

proceeds to the Company of up to \$7.0 million (such transaction, the “Hanmi Investment”). Hanmi Pharmaceutical is a current shareholder of the Company and holds, as of the date of this current report, approximately 884,152 common shares which represents approximately 12.07% of the Company’s issued and outstanding common shares on a non-diluted basis. The Hanmi Investment was structured in two tranches. The first tranche of \$3.0 million was paid upon the signing of the Subscription Agreement for the issuance of 668,449 common shares at the Purchase Price. The second tranche of \$4.0 million (the “Second Tranche”) will be priced at a premium to the Nasdaq “Minimum Price” based on a formula set forth in the Subscription Agreement and will be paid upon the Company achieving certain milestones. The securities were issued pursuant to an exemption from registration provided for under Section 4(a)(2) of the Securities Act. The Company relied on this exemption from registration based in part on representations made by the investor.

Item 16. Exhibits and Financial Statement Schedules.

(a) See the Exhibit Index on the page immediately preceding the signature page hereto for a list of exhibits filed as part of this registration statement on Form S-1, which Exhibit Index is incorporated herein by reference.

(b) No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or the notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.; provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the Company pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

Table of Contents

(A) Each prospectus filed by the Company pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(6) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to any charter provision, by law or otherwise, the Company has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

EXHIBIT INDEX

The following documents are being filed with the Commission as exhibits to this registration statement on FormS-1.

Exhibit Number	Description of Document
1.1**	Form of Underwriting Agreement
3.1	Articles of Incorporation, Arrangement and Amendment (incorporated herein by reference to Exhibit 99.3 to the Company's Current Report on Form 6-K filed with the SEC on June 12, 2015)
3.2	Certificate of Amendment (incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form8-K filed with the SEC on June 5, 2023)
3.3	By-law #2 of the Company (incorporated herein by reference to Exhibit 99.2 to the Company's Current Report on Form 6-K filed with the SEC on June 12, 2015)
4.1	Description of Securities (incorporated by reference to Exhibit 4.1 to the Company's Annual report on Form10-K filed with the SEC on March 22, 2022)
4.2**	Form of Warrant Offered in this Offering
4.3**	Form of Pre-Funded Warrant Offered in this Offering
5.1**	Opinion of McCarthy Tétrault LLP
5.2**	Opinion of Dorsey & Whitney LLP related to the Warrants and Pre-Funded Warrants
10.1	Indemnification Agreement dated July 10, 2007 between Lorus Therapeutics Inc. and the Company (incorporated herein by reference to Exhibit 99.1 to the Company's Current Report on Form 6-K filed with the SEC on September 4, 2007)
10.2+	Amended and Restated Executive Employment Agreement between the Company and Dr. William G. Rice dated August 19, 2014 (incorporated herein by reference to Exhibit 4.9A to the Company's Annual Report on Form 20-F filed with the SEC on March 4, 2015)
10.3+	Share Option Plan as amended May 5, 2015 (incorporated herein by reference to Exhibit 99.2 to the Company's Current Report on Form6-K filed with the SEC on June 12, 2015)
10.4+	Stock Incentive Plan as adopted May 5, 2015 (incorporated herein by reference to Exhibit 99.1 to the Company's Current Report on Form 6-K filed with the SEC on June 12, 2015)
10.5+	Form of Executive Employment Agreement, dated December 4, 2019, between the Company and Dr. Rafael Bejar (incorporated herein by reference to Exhibit 10.7 to the Company's Annual Report filed on Form 10-K filed with the SEC on March 10, 2020)
10.6	License agreement dated June 13, 2018 by and between the Company and CrystalGenomics, Inc. (incorporated herein by reference to Exhibit 1.1 to the Company's Current Report on Form 6-K filed with the SEC filed on June 22, 2018)
10.7	Option and License Agreement between the Company and CrystalGenomics, Inc. dated March 21, 2016 (incorporated herein by reference on Form 10-KA/3 filed with the SEC on April 22, 2019)

Table of Contents

10.8	<u>Amendment to Option and License Agreement between the Company and CrystalGenomics, Inc., dated April 26, 2016 (incorporated herein by reference to Exhibit 99.2 to the Company's Current Report on Form 6-K filed with the SEC on June 8, 2016)</u>
10.9	<u>Second Amendment to Option and License Agreement between the Company and CrystalGenomics, Inc., dated May 13, 2016 (incorporated herein by reference to Exhibit 99.3 to the Company's Current Report on Form 6-K filed with the SEC on June 8, 2016)</u>
10.10	<u>Third Amendment to Option and License Agreement between the Company and CrystalGenomics, Inc., dated May 19, 2016 (incorporated herein by reference to Exhibit 99.4 to the Company's Current Report on Form 6-K filed with the SEC on June 8, 2016)</u>
10.11	<u>Fourth Amendment to Option and License Agreement between the Company and CrystalGenomics, Inc., dated June 1, 2016 (incorporated herein by reference to Exhibit 99.5 to the Company's Current Report on Form 6-K filed with the SEC on June 8, 2016)</u>
10.12	<u>License Agreement dated as of March 6, 2018 by and between the Company and Ohm Oncology Inc. (incorporated herein by reference to Exhibit 99.2 on Form 6-K filed with the SEC filed on March 8, 2018)</u>
10.13+	<u>Aptose Biosciences Inc. 2021 Employee Stock Purchase Plan (incorporated by reference to the Definitive Proxy statement on Schedule 14A filed with the SEC on April 1, 2021)</u>
10.14+	<u>Aptose Biosciences Inc. 2021 Employee Stock Incentive Plan (incorporated by reference to the Definitive Proxy statement on Schedule 14A filed with the SEC on April 1, 2021)</u>
10.15	<u>Exclusive License Agreement, dated November 4, 2021, by and between Hanmi Pharmaceutical Co. Ltd. and Aptose Biosciences Inc. (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report filed on Form 8-K on November 4, 2021)</u>
10.16	<u>Employment Agreement dated June 3, 2019 between Aptose Biosciences Inc. and Philippe Ledru (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report filed on Form 8-K on April 11, 2022)</u>
10.17	<u>Employment Agreement, dated June 27, 2022, between Aptose Biosciences Inc. and Fletcher Payne (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report filed on Form 8-K on June 28, 2022)</u>
10.18	<u>Equity Distribution Agreement, dated December 9, 2022, among Aptose Biosciences Inc. and JonesTrading Institutional Services LLC (incorporated herein by reference to Exhibit 10.1 to the Company's Current Report filed on Form 8-K on December 12, 2022)</u>
21.1	<u>List of Subsidiaries (incorporated herein by reference to Exhibit 21.1 to the Company's Current Report filed on Form 10-K on March 24, 2023)</u>
23.1*	<u>Consent of Independent Registered Public Accounting Firm (KPMG)</u>
23.2**	Consent of McCarthy Tétrault LLP (included in Exhibit 5.1)
23.3**	Consent of Dorsey & Whitney LLP (included in Exhibit 5.2)
24.1*	<u>Powers of Attorney (included on signature page)</u>
107*	<u>Filing Fees</u>

+ Indicates management contract or compensatory plan.

* Filed herewith.

** To be filed by amendment.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Company certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Toronto, Ontario, Canada on December 1, 2023.

Aptose Biosciences Inc.

By: /s/ Fletcher Payne

Fletcher Payne

Senior Vice President and Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints William G. Rice and Fletcher Payne, and each of them, either of whom may act without the joinder of the other, as his or her true and lawful agent, proxy and attorney-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this registration statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, together with all schedules and exhibits thereto, (ii) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, (iii) act on and file any supplement to any prospectus included in this registration statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and (iv) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he might or could do in person, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Table of Contents

Name	Positions	Date
<u>/s/ William G. Rice</u> William G. Rice	President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	December 1, 2023
<u>/s/ Fletcher Payne</u> Fletcher Payne	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	December 1, 2023
<u>/s/ Denis Burger</u> Denis Burger	Director	December 1, 2023
<u>/s/ Carol Ashe</u> Carol Ashe	Director	December 1, 2023
<u>/s/ Dr. Erich M. Platzer</u> Dr. Erich M. Platzer	Director	December 1, 2023
<u>/s/ Dr. Bernd R. Seizenger</u> Dr. Bernd R. Seizenger	Director	December 1, 2023
<u>/s/ Dr. Mark Vincent</u> Dr. Mark Vincent	Director	December 1, 2023
<u>/s/ Warren Whitehead</u> Warren Whitehead	Director	December 1, 2023

AUTHORIZED REPRESENTATIVE

Pursuant to the requirements of Section 6(a) of the Securities Act of 1933, the undersigned has signed this registration statement, solely in the capacity of the duly authorized representative of Aptose Biosciences Inc. in the United States, on this 1st day of December, 2023.

APTOSE BIOSCIENCES U.S. INC.

By: /s/ Fletcher Payne

Name: Fletcher Payne
Title: Senior Vice President and
Chief Financial Officer



KPMG LLP
100 New Park Place, Suite 1400
Vaughan, ON L4K 0J3
Tel 905-265 5900
Fax 905-265 6390
www.kpmg.ca

Consent of Independent Registered Public Accounting Firm

The Board of Directors

Aptose Biosciences Inc.

We, consent to use of our report dated March 23, 2023, on the consolidated financial statements of Aptose Biosciences Inc., which comprise the consolidated statements of financial position as at December 31, 2022 and December 31, 2021, the related consolidated statements of loss and comprehensive loss, changes in shareholders' equity and cash flows for the years then ended, and the related notes, which is incorporated by reference, and to the reference to our firm under the heading "Experts", in the prospectus included in the registration statement (No. 333-[]) dated December 1, 2023 on Form S-1 of Aptose Biosciences Inc..

/s/ KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

December 1, 2023

Vaughan, Canada

Calculation of Filing Fee Tables

Form S-1
(Form Type)

Aptose Biosciences Inc.

(Exact Name of Each Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price(1)	Fee Rate	Amount of Registration Fee
Fees to Be Paid	Equity	Common Shares, no par value per share("Common Shares")(2)	457(o)			\$10,000,000	0.00014760	\$1,476.00
	Other	Pre-funded Warrants to purchase Common Shares(3)	Other			—		(3)
	Equity	Common Shares underlying the Pre-Funded Warrant(3)	457(o)			—		(3)
	Other	Warrants to purchase Common Shares	Other			—		(4)
	Equity	Common Shares underlying the Warrants to purchase Common Shares	457(o)			\$10,000,000	0.00014760	\$1,476.00
	Total Offering Amounts					\$20,000,000	0.00014760	\$2,952.00
	Total Fees Previously Paid							—
	Total Fee Offsets							—
	Net Fee Due							\$2,952.00

- (1) Estimated solely for the purpose of calculating the amount of the registration fee in pursuant to Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act")
- (2) Pursuant to Rule 416 under the Securities Act, this registration statement shall also cover any additional shares of the registrant's securities that become issuable by reason of any share splits, share dividends or similar transactions.
- (3) The proposed maximum aggregate offering price of the Common Shares will be reduced on a dollar-for-dollar basis based on the offering price of any pre-funded warrants issued in the offering, and the proposed maximum aggregate offering price of the pre-funded warrants to be issued in the offering will be reduced on a dollar-for-dollar basis based on the offering price of any Common Share issued in the offering. Accordingly, the proposed maximum aggregate offering price of the Common Shares and pre-funded warrants (including the Common Shares issuable upon exercise of the pre-funded warrants), if any, is \$10,000,000.
- (4) No separate registration fee is payable pursuant to Rule 457(g) under the Securities Act.