CONFIDENTIAL TREATMENT REQUESTED BY XORTX THERAPEUTICS INC.
PURSUANT TO 17 C.F.R. SECTION 200.83

This is a confidential draft submission to the United States Securities and Exchange Commission on May 25, 2021 under the Securities Act of 1933, as amended.

Registration Statement No. 333-

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

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

XORTX THERAPEUTICS INC.
(Exact name of registrant as specified in its charter)

British Columbia	**2834**	**N/A**
(State or other jurisdiction of incorporation or organization)	**(Primary Standard Industrial Classification Code Number)**	**(I.R.S. Employer Identification No.)**

Suite 4000, 421 – 7th Avenue SW
Calgary, Alberta, Canada T2P 4K9
(403) 455-7717
(Address, including zip code and telephone number, including area code, of registrant's principal executive offices)

TSX Trust Company
100 Adelaide Street West, Suite 301
Toronto, Ontario, Canada M5H 4H1
(416) 342-1091
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

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, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please 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 registrant is an emerging growth company as defined in Rule 405 of the Securities Act.

Emerging growth company ☒

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant 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 term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Proposed Maximum Aggregate Offering Price(1)(2)	Amount of Registration Fee
Common shares, without par value[4]	US$ 17,250,000	US$ 1,882.00
Pre-funded warrants to purchase common shares and common shares issuable upon exercise thereof[3][4]		
Warrants to purchase common shares and common shares issuable upon the exercise thereof		
Underwriter's warrants to purchase common shares and common shares issuable upon the exercise thereof[5]		
Total	US$ 17,250,000	US$ 1,882.00

(1) Estimated solely for the purpose of determining the amount of registration fee in accordance with Rule 457(o) under the Securities Act. Includes the offering price attributable to additional shares that the underwriters have the option to purchase to cover over-allotments, if any.

(2) Calculated pursuant to Rule 457(o) under the Securities Act, based on an estimate of the proposed maximum aggregate offering price.

(3) The proposed maximum aggregate offering price of the common stock proposed to be sold in the offering will be reduced on a dollar-for-dollar basis based on the aggregate offering price of the pre-funded warrants offered and sold in the offering (plus the aggregate exercise price of the common stock issuable upon exercise of the pre-funded warrants), and as such the proposed aggregate maximum offering price of the common stock and pre-funded warrants (including the common stock issuable upon exercise of the pre-funded warrants), if any, is US$17,250,000.

(4) In accordance with Rule 416(a), we are also registering an indeterminate number of additional common shares that shall be issuable pursuant to Rule 416 to prevent dilution resulting from share splits, share dividends or similar transactions.

(5) The Registrant will issue to the underwriters warrants to purchase a number of common shares equal to an aggregate of % of the common shares and/or pre-funded warrants sold in the offering. The exercise price of the underwriters' warrants is equal to % of the offering price of the common shares and/or pre-funded warrants offered hereby. The underwriters' warrants are exercisable beginning six months from the effective date of the offering, from time to time, in whole or in part, within five years commencing from the effective date of the offering.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant 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 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 preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED MAY 25, 2021

PRELIMINARY PROSPECTUS

Common Shares,

Pre-Funded Warrants to Purchase

Common Shares and Warrants to Purchase

Common Shares

XORTX Therapeutics Inc.

We are offering common shares, no par value, and warrants ("Common Share Purchase Warrants") to purchase common shares pursuant to this prospectus at an assumed public offering price of US$ per common share and of a Common Share Purchase Warrant, which is based on the last reported price of our common shares on the Canadian Securities Exchange on May 24th, 2021 of $0.17 per common share. Each whole Common Share Purchase Warrant is exercisable to purchase one common share at an exercise price of US$, will be exercisable upon issuance and will expire years from the date of issuance. The common shares and Common Share Purchase Warrants will be separately issued, but the common shares and warrants will be issued and sold to purchasers. Common Share Purchase Warrants will be issued in book-entry form pursuant to a warrant agency agreement between us and as warrant agent. This prospectus also relates to the offering of the common shares issuable upon exercise of Common Share Purchase Warrants. The common shares and the accompanying Public Warrants can only be purchased together in this offering but will be issued separately and will be immediately separable upon issuance.

We are also offering to certain purchasers whose purchase of common shares in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common shares immediately following the consummation of this offering, the opportunity to purchase, if any such purchaser so chooses, pre-funded warrants, in lieu of common shares that would otherwise result in such purchaser's beneficial ownership exceeding 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common shares. Each pre-funded warrant will be exercisable for one common share. The purchase price of each pre-funded warrant and the accompanying Common Share Purchase Warrant will be equal to the price at which a common share and accompanying Common Share Purchase Warrant are sold to the public in this offering, minus US$0.0001, and the exercise price of each pre-funded warrant will be US$0.0001 per common share. The pre-funded warrants will be immediately exercisable and may be exercised at any time until all of the pre-funded warrants are exercised in full. This offering also relates to the common shares issuable upon exercise of any pre-funded warrants sold in this offering. Each pre-funded warrant is being sold together with of a Common Share Purchase Warrant. Each whole Common Share Purchase Warrant is exercisable to purchase one common share at an exercise price of US$ per common share, will be exercisable upon issuance and will expire years from the date of issuance. For each pre-funded warrant we sell, the number of common shares we are offering will be decreased on a one-for-one basis. Because we will issue of a Common Share Purchase Warrant for each common share and for each pre-funded warrant to purchase one common share sold in this offering, the number of Common Share Purchase Warrants sold in this offering will not change as a result of a change in the mix of the common shares and pre-funded warrants sold. The common shares and pre-funded warrants, and the accompanying Common Share Purchase Warrants, can only be purchased together in this offering but will be issued separately and will be immediately separable upon issuance.

Our common shares are currently quoted under the symbol "XRTXF" on the OTCQB and under the symbol "XRX" on the Canadian Securities Exchange ("CSE"). We have applied to list our common shares on the Nasdaq Capital Market ("Nasdaq") under the symbol "XRTX" and on the TSX Venture Exchange (the "TSXV") under the trading symbol " ". The successful listing of our common shares on Nasdaq is a condition of this offering. We are an "emerging growth company" as defined by the Jumpstart Our Business Startups Act of 2012 and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings. The Common Share Purchase Warrants and the pre-funded warrants will not be listed on any national securities exchange or other nationally recognized trading system.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 9.

	Per Common Share and related Common Share Purchase Warrant	Total
Initial public offering price	US$	US$
Underwriting discounts and commissions(1)	US$	US$
Proceeds to us, before expenses	US$	US$

(1) The underwriters will receive compensation in the form of reimbursement of expenses, addition to the underwriting discount and commissions. See "Underwriting" for additional information regarding total underwriter compensation.

We have granted the underwriters the right to purchase up to an additional common shares and/or pre-funded warrants and related Common Share Purchase Warrants to cover over-allotments, if any. The underwriters can exercise this right at any time within days after the date of this prospectus.

The underwriters expect to deliver the securities against payment on or about , 2021.

Neither the Securities and Exchange Commission nor any state or Canadian 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.

A.G.P.

Prospectus dated _____, 2021

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form F-1 that we filed with the SEC.

You should read this prospectus and the related registration statement carefully. This prospectus and registration statement contain important information you should consider when making your investment decision. See "Where You Can Find More Information" in this prospectus.

Neither we nor the underwriters have authorized anyone to provide you with information other than that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give to you. The information contained in this prospectus or any free writing prospectus is accurate only as of the date of this prospectus or such free writing prospectus, regardless of the time of delivery of this prospectus or any free writing prospectus.

We are offering to sell, and seeking offers to buy, securities only in jurisdictions where offers and sales are permitted. Neither we nor the underwriters have taken any action to permit a public offering of our securities or the possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

We express all amounts in this prospectus in Canadian dollars, except where otherwise indicated. References to "$"is to Canadian dollars and references to "US$" are to U.S. dollars.

Except as otherwise indicated, references in this prospectus to "XORTX," "the Company," "we," "us" and "our" refer to XORTX Therapeutics Inc. and its consolidated subsidiaries.

PROSPECTUS SUMMARY

This summary highlights certain information contained elsewhere in this prospectus. This summary does not contain all of the information that may be important to you. You should read and carefully consider the following summary together with the entire prospectus, especially the "Risk Factors" section of this prospectus and our consolidated financial statements and the notes thereto appearing elsewhere in this prospectus before deciding to invest in our securities. For more information on our business refer to the "Business" section of this prospectus. Some of the statements in this prospectus constitute forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in such forward-looking statements as a result of certain factors, including those discussed in the "Risk Factors" and other sections of this prospectus. See "Cautionary Note Regarding Forward-Looking Statements."

Overview

XORTX Therapeutics is a clinical-stage biotechnology company, focused on identifying, developing and commercializing therapies to treat progressive kidney disease modulated by aberrant purine and uric acid metabolism and uric acid metabolism in orphan (rare) disease indications such as autosomal dominant polycystic kidney disease ("ADPKD") and larger, more prevalent type 2 diabetic nephropathy ("T2DN") and acute kidney injury ("AKI") due to coronavirus infection.

Our focus is on developing three therapeutic products to slow or reverse the progression of kidney disease in patients at risk of end stage kidney failure, address the immediate need of individuals facing coronavirus induced AKI and the identification of other opportunities where our existing and new intellectual property can be leveraged to address health issues. We believe that our innovative technology is underpinned by well-established research and insights into the underlying biology of oxypurinol, a powerful uric acid lowering agent that works by effectively inhibiting xanthine oxidase. We combine the power of oxypurinol with innovative therapeutic products existing drugs that can be adapted for different disease indications where elevated uric acid is a common denominator, including polycystic kidney disease, pre-diabetes, insulin resistance, metabolic syndrome, diabetes, diabetic nephropathy, and infections. Oxypurinol, and our proprietary pipeline-in-a-product strategy supported by our intellectual property, established exclusive manufacturing agreements, and proposed clinical trials with experienced clinicians, are focused on building a robust pipeline of assets to address the unmet medical needs for patients with a variety of serious or life-threatening diseases.

Our three lead product candidates are XRx-008, a novel program for the treatment of ADPKD; XRx-101, a program for the treatment of COVID-19, AKI and associated health consequences; and XRx-225, a program for the treatment of T2DN. At XORTX Therapeutics, we aim to redefine the treatment of kidney diseases by developing medications to improve the quality-of-life of patients with life-threatening diseases by lowering elevated uric acid as a therapy.

Our Proprietary Therapeutic Platforms

Our expertise and understanding of the pathological effects of aberrant purine metabolism combined with our understanding of uric acid lowering agent structure and function, has enabled the development of our proprietary therapeutic platforms. These are a complementary suite of therapeutic formulations designed to provide unique solutions for acute and chronic disease. Our therapeutic platforms can be used alone, or in combination, with synergistic activity to develop a multifunctional tailored approach to a variety of disease entities that can address disease in multiple body systems through management of chronic or acute hyperuricemia, immune modulation, and metabolic disease. We continue to leverage these therapeutic platforms to expand our pipeline of novel and next generation drug-based therapies that we believe could represent significant improvements to the standard of care in multiple acute and chronic cardiovascular diseases and specifically kidney disease.

We believe our in-house drug design and formulation capabilities confer significant competitive advantage to our therapeutic platforms and are ultimately reflected in our programs. Some of these key advantages are:

Highly Modular and Customizable.

Our platforms can be combined in multiple ways and this synergy can be applied to address acute, intermittent or chronic disease progression. For example, our XRx-101 program for acute kidney injury is designed to produce

rapid suppression of hyperuricemia then maintain purine metabolism. Our XRx-008 program is designed for longer term stable chronic oral dosing of xanthine oxidase inhibitors. The capabilities of our formulation technology allow us to manage the unique challenges of cardiovascular and renal disease by modulating, purine metabolism, inflammatory and oxidative state.

Fit-for-purpose.

Our platforms can also be utilized to engineer new chemical entities and formulations of those agents that have enhanced properties. For example, XRx-225 represents a new class of xanthine oxidase inhibitor with a targeted design to enhanced anti-inflammatory activity. The capability of tailoring the therapeutic benefit of this class of new agents permits us to identify targets and disease that we wish to exploit and then through formulation design optimize those small molecules and proprietary formulations to maximize clinically meaningful therapeutic effect.

Readily scalable and transferable.

Our in-house small molecule and formulations design expertise is positioned to create a steady succession of product candidates that are scalable, efficient to manufacture (by us or a partner or contract manufacturing organization), and produce high production and high purity active pharmaceutical drug product. We believe this will provide a significant competitive advantage, new intellectual property and opportunity to provide first-in-class products that target unmet medical needs and clinically meaningful quality of life.

Our team's expertise in uric acid lowering agents, specifically in the development and use of xanthine oxidase inhibitors, has enabled the development of our therapeutic platforms to treat the symptoms of, and potentially delay the progression of, ADPKD, chronic, and acute kidney disease.

Product Candidate Pipeline

Our lead product candidates are XRx-008, XRx-101, and XRx-225. XRx-008 is in preparations for a Phase 3 registration clinical trial, the last stage of clinical development before FDA approval. Our XRx-101 program is advancing toward preparing for a "bridging" pharmacokinetic study for the Company's Phase 3 clinical trial to slow or reverse acute kidney disease in hospitalized individuals with COVID-19. XRx-225 is at the non-clinical stage and advancing toward the clinical development stage.

Our Strategy

Our goal is to apply our interdisciplinary expertise and pipeline-in-a-product strategy to further identify, develop and commercialize novel treatments in orphan indications, with an initial focus on renal and significant unmet medical needs.

To achieve this objective, we intend to pursue the following strategies:

- Rapidly and efficiently advance XRx-008 through Phase 3 clinical development and regulatory approval in order to establish a new standard of care for ADPKD.
- Maximize the potential of XRx-008, if approved, through commercialization independently and through opportunistic collaborations with third parties.
- Leverage our pipeline-in-a-product strategy, developing additional proprietary formulations leveraging our experience selecting orphan indications and complementing our developments through acquisitions or in-licensing opportunities in nephrology and diabetes when opportunities arise.

Risk Factors

- Our ability to implement our business strategy is subject to numerous risks that you should be aware of before making an investment decision. These risks are described more fully in the section entitled "Risk Factors" in this prospectus. These risks include, among others:
- we have incurred significant losses since inception and anticipate that we will continue to incur losses for the foreseeable future;

- we will require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not available, may require us to delay, scale back, or cease our product development programs or operations;
- we have not generated any revenue to date and may never be profitable;
- we have a limited number of product candidates, all which are still in preclinical or clinical development, and we may fail to obtain regulatory approval or experience significant delays in doing so;
- our product candidates may have undesirable side effects that may delay or prevent marketing approval or, if approved, require them to be taken off the market, require them to include safety warnings or otherwise limit their sales;
- we may be unable to obtain regulatory approval for our product candidates under applicable regulatory requirements, and the denial or delay of any such approval would delay commercialization of our product candidates and adversely impact our potential to generate revenue, our business and our results of operations;
- security breaches, loss of data and other disruptions could compromise sensitive information related to our business or protected health information or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation;
- COVID-19 pandemic may materially and adversely affect our business and financial results;
- our existing strategic partnerships are important to our business, and future strategic partnerships may also be important to us; if we are unable to maintain any of these strategic partnerships, or if these strategic partnerships are not successful, we may not realize the anticipated benefits of our strategic partnerships and our business could be adversely affected;
- we rely on third parties to monitor, support, conduct and oversee clinical trials of the product candidates that we are developing and, in some cases, to maintain regulatory files for those product candidates;
- our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties;
- our patents covering one or more of our products or product candidates could be found invalid or unenforceable if challenged;
- if we are unable to obtain, maintain and enforce patent and trade secret protection for our product candidates and related technology, our business could be materially harmed; and
- if we are unable to protect the confidentiality of our proprietary information, the value of our technology and products could be adversely affected.

Our Corporate Information

We were incorporated under the laws of Alberta, Canada on August 24, 2012 under the name ReVasCor Inc. and were continued under the Canada Business Corporations Act on February 27, 2013 under the name of XORTX Pharma Corp. Upon completion of a reverse take-over transaction on January 10, 2018 with APAC Resources Inc. (“APAC”), a company incorporated under the laws of British Columbia, we changed our name to “XORTX Therapeutics Inc.” and XORTX Pharma Corp. became a wholly-owned subsidiary.

Our registered office is located at Suite 4000, 421 – 7th Avenue SW, Calgary, Alberta, Canada T2P 4K9 and our telephone number is (403) 455-7717. Our website address is www.xortx.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Implications of Being an Emerging Growth Company

As a company with less than US$1.07 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of specified reduced reporting and other burdens that are otherwise applicable generally to public companies. These provisions include:

- reduced executive compensation disclosure;
- exemptions from the requirement to hold a non-binding advisory vote on executive compensation, including golden parachute compensation; and
- an exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to the Sarbanes-Oxley Act of 2002

We may take advantage of these provisions until we are no longer an emerging growth company. We would cease to be an emerging growth company upon the earlier to occur of: (1) the last day of our fiscal year following the fifth anniversary of the completion of this offering; (2) the last day of the fiscal year in which we have total annual gross revenue of US$1.07 billion or more; (3) the date on which we have issued more than US$1.0 billion in nonconvertible debt during the previous three years; or (4) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, or the SEC.

We intend to report under the Securities Exchange Act of 1934, as amended, or the Exchange Act, as a non-U.S. company with foreign private issuer status. Even after we no longer qualify as an emerging growth company, as long as we continue to qualify as a foreign private issuer under the Exchange Act, we will be exempt from certain provisions of the Exchange Act that are applicable to U.S. domestic public companies, including:

- the sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations with respect to a security registered under the Exchange Act;
- the sections of the Exchange Act requiring insiders to file public reports of their share ownership and trading activities and liability for insiders who profit from trades made in a short period of time; and
- the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q containing unaudited financial statements and other specified information, and current reports on Form 8-K upon the occurrence of specified significant events, although we report our results of operations on a quarterly basis under the Canadian securities laws.

Both foreign private issuers and emerging growth companies are also exempt from certain more stringent executive compensation disclosure rules. Thus, even if we no longer qualify as an emerging growth company, but remain a foreign private issuer, we will continue to be exempt from the more stringent compensation disclosures required of companies that are neither an emerging growth company nor a foreign private issuer.

We would cease to be a foreign private issuer at such time as more than 50% of our outstanding voting securities are held by U.S. residents, and any one of the following three circumstances applies: (i) the majority of our executive officers or directors are U.S. citizens or residents, (ii) more than 50% of our assets are located in the United States or (iii) our business is administered principally in the United States.

In this prospectus, we have taken advantage of certain of the reduced reporting requirements as a result of being an emerging growth company and a foreign private issuer. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold equity securities.

The Offering

Common shares offered by us	Shares, assuming no sale of pre-funded warrants.
Pre-funded warrants offered by us	We are also offering to certain purchasers whose purchase of common shares in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common shares immediately following the consummation of this offering, the opportunity to purchase, if such purchasers so choose, pre-funded warrants, in lieu of common shares that would otherwise result in any such purchaser's beneficial ownership exceeding 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common shares. Each pre-funded warrant will be exercisable for one common share. The purchase price of each pre-funded warrant and the accompanying Common Share Purchase Warrant will equal the price at which the common shares and the accompanying Common Share Purchase Warrant are being sold to the public in this offering, minus $0.0001, and the exercise price of each pre-funded warrant will be $0.0001 per share. The pre-funded warrants will be exercisable immediately and may be exercised at any time until all of the pre-funded warrants are exercised in full. This offering also relates to the common shares issuable upon exercise of any pre-funded warrants sold in this offering. For each pre-funded warrant we sell, the number of common shares we are offering will be decreased on a one-for-one basis. Because we will issue of a Common Share Purchase Warrant for each common share and for each pre-funded warrant to purchase one common share sold in this offering, the number of Common Share Purchase Warrants sold in this offering will not change as a result of a change in the mix of the common shares and pre-funded warrants sold. For additional information, see "Description of Securities—Pre-Funded Warrants to be Issued as Part of this Offering" on page of 117 this prospectus.
Common Share Purchase Warrants offered by us	Common Share Purchase Warrants to purchase an aggregate of common shares. Each common share and each pre-funded warrant to purchase one common share is being sold together with of a Common Share Purchase Warrant to purchase one common share. Each Common Share Purchase Warrant will have an exercise price of US$ per share, will be immediately exercisable and will expire on the anniversary of the original issuance date. The common shares and pre-funded warrants, and the accompanying Common Share Purchase Warrants, as the case may be, can only be purchased together in this offering but will be issued separately and will be immediately separable upon issuance. This prospectus also relates to the offering of the common shares issuable upon exercise of the Common Share Purchase Warrants. For additional information, see "Description of Securities—Common Share Purchase Warrants to be Issued as Part of this Offering" on page 118 of this prospectus
Over-allotment option	We have granted the underwriters a -day option to purchase up to additional common shares and/or Common Share Purchase Warrants at the public offering price, less underwriting discounts and commissions on the same terms as set forth in this prospectus.
Common shares to be outstanding after this offering	shares (shares if the over-allotment option is exercised in full) (assuming none of the warrants issued in this offering are exercised and no sale of any pre-funded warrants).

Use of proceeds	We estimate that the net proceeds to us from the sale of securities in this offering will be approximately U S $ million, or US$ million if the underwriters exercise their over-allotment option in full, assuming an initial public offering price of US$ per share and related Common Share Purchase Warrants as set forth on the cover page of this prospectus, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds of this offering to fund our ongoing research and development activities, and for working capital and general corporate purposes. See "Use of Proceeds.
Proposed Nasdaq Capital Market trading symbol	"XRTX"
No Listing of Warrants	We do not intend to apply for listing of the pre-funded warrants or Common Share Purchase Warrants on any national securities exchange or trading system.
Risk factors	See "Risk Factors" and the other information included in this prospectus for a discussion of factors you should consider carefully before investing in our common shares.

The number of common shares to be outstanding after this offering is based on 110,076,717 common shares outstanding as of May 7, 2021, and excludes:

- 5,200,000 common shares issuable upon the exercise of outstanding options to issue common shares, as of May 7, 2021, at a weighted-average exercise price of $0.28 per share; and
- 25,170,626 common shares issuable upon the exercise of outstanding common share warrants, as of May 7, 2021, at a weighted-average exercise price of $0.40 per share.
- Unless otherwise indicated, all information in this prospectus reflects or assumes: (i) no exercise of the Common Share Purchase Warrants or warrants issued to the underwriters; and (ii) no exercise by the underwriters of their option to purchase up to an additional _____ common shares and/or pre-funded warrants in this offering.

Summary Historical Consolidated Financial Data

The following tables summarize our historical consolidated financial data for the periods presented and should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations", and our consolidated financial statements and related notes appearing elsewhere in this prospectus. The summary historical consolidated statements of operations data for the years ended December 31, 2020 and 2019 have been derived from our audited consolidated financial statements and related notes included elsewhere in this prospectus. Our consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS"), and are presented in Canadian dollars except where otherwise indicated. Our historical results are not necessarily indicative of the results we expect in the future.

	December 31, 2020	December 31, 2019
	$	$
Expenses		
Amortization	20,439	19,900
Consulting	102,880	46,561
General and administrative	9,516	17,344
Investor relations	241,177	34,782
Listing fees	52,138	42,495
Professional fees	162,580	108,427
Research and development	277,455	39,897
Share-based payments	293,443	26,317
Travel	8,460	36,076
Wages and benefits	227,905	194,166
Loss before other items	(1,395,993)	(565,965)
Accretion	(846)	(1,638)
Foreign exchange gain (loss)	2,961	(26,397)
Interest and other expenses	(12,666)	(35,576)
Impairment of intangible assets	(64,562)	-
Recovery of provision for patent acquisition	95,490	-
Forgiveness of debt	91,014	-
Net loss and comprehensive loss for the year	(1,284,602)	(629,576)
Basic and diluted loss per common share	(0.02)	(0.01)
Weighted average number of common shares outstanding		
Basic and diluted	78,235,658	62,919,691

RISK FACTORS

Investing in our securities is speculative and involves a high degree of risk. You should consider carefully the following risk factors, as well as the other information in this prospectus, including our consolidated financial statements and notes thereto, before you decide to purchase our securities. If any of the following risks actually occur, our business, financial conditions, results of operations and prospects could be materially adversely affected, the value of our securities could decline and you may lose all or part of your investment. This prospectus also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a number of factors, including the risks described below. See "Cautionary Note Regarding Forward-Looking Statements."

Risks Related to Our Financial Position and Need for Additional Capital

We have incurred significant losses since inception and anticipate that we will continue to incur losses for the foreseeable future. We have no products approved for commercial sale, and to date we have not generated any revenue or profit from product sales. We may never achieve or sustain profitability.

We are a clinical-stage biopharmaceutical company. We have incurred significant losses since our inception. Our net losses for the years ended December 31, 2018, 2019 and 2020 were $3.77 million, $629 thousand and $1.28 million, respectively. As of December 31, 2020, our accumulated deficit was approximately $8.04 million. We expect to continue to incur losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek regulatory approvals for, our product candidates, prepare for and begin to commercialize any approved product candidates and add infrastructure and personnel to support our product development efforts and operations as a public company. The net losses and negative cash flows incurred to date, together with expected future losses, have had, and likely will continue to have, an adverse effect on our shareholders' deficit and working capital. The amount of future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue.

Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. For example, our expenses could increase if we are required by the FDA to perform trials in addition to those that we currently expect to perform, or if there are any delays in completing our currently planned clinical trials or in the development of any of our product candidates.

To become and remain profitable, we must succeed in developing and commercializing product candidates with significant market potential. This will require us to be successful in a range of challenging activities for which we are only in the preliminary stages, including developing product candidates, obtaining regulatory approval for such product candidates, and manufacturing, marketing and selling those product candidates for which we may obtain regulatory approval. We may never succeed in these activities and may never generate revenue from product sales that is significant enough to achieve profitability. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our failure to become or remain profitable would depress our market value and could impair our ability to raise capital, expand our business, develop other product candidates, or continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

We will require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not available, may require us to delay, scale back, or cease our product development programs or operations.

We are currently advancing two of our product candidates through preclinical and clinical development as well as other potential product candidates through discovery. Developing pharmaceutical products, including conducting preclinical studies and clinical trials, is expensive. In order to obtain such regulatory approval, we will be required to conduct clinical trials for each indication for each of our product candidates. We will continue to require additional funding beyond this contemplated offering to complete the development and commercialization of our product candidates and to continue to advance the development of our other product candidates and such funding may not be available on acceptable terms or at all.

Although it is difficult to predict our liquidity requirements, based upon our current operating plan, we believe that the net proceeds from this offering, together with our existing cash and cash equivalents will enable us to advance

the clinical development of XRx-008, XRx-101 and XRx-225 product candidates. However, because successful development of our product candidates and the achievement of milestones by our strategic partners is uncertain, we are unable to estimate the actual funds we will require to complete research and development and to commercialize our product candidates.

Our future funding requirements will depend on many factors, including but not limited to:

- the number and characteristics of other product candidates that we pursue;
- the scope, progress, timing, cost and results of research, preclinical development, and clinical trials;
- the costs, timing and outcome of seeking and obtaining FDA and non-U.S. regulatory approvals;
- the costs associated with manufacturing our product candidates and establishing sales, marketing and distribution capabilities;
- our ability to maintain, expand and defend the scope of our intellectual property portfolio, including the amount and timing of any payments we may be required to make in connection with the licensing, filing, defense and enforcement of any patents or other intellectual property rights;
- our need and ability to hire additional management, scientific and medical personnel;
- the effect of competing products that may limit market penetration of our product candidates;
- our need to implement additional internal systems and infrastructure, including financial and reporting systems; and
- the economic and other terms, timing of and success of our existing strategic partnerships, and any collaboration, licensing, or other arrangements into which we may enter in the future, including the timing of receipt of any milestone or royalty payments under these agreements.

Until we can generate a sufficient amount of product revenue to finance our cash requirements, which we may never do, we expect to finance future cash needs primarily through a combination of public and private equity offerings. If sufficient funds on acceptable terms are not available when needed, or at all, we could be forced to significantly reduce operating expenses and delay, scale back or eliminate one or more of our development programs or our business operations.

Raising additional capital may cause dilution to our shareholders, including purchasers of securities in this offering, restrict our operations or require us to relinquish substantial rights.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these new securities may include liquidation or other preferences that adversely affect your rights as a common shareholder. Debt financing, if available at all, may involve agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures, or declaring dividends. If we raise additional funds through partnerships, collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, product candidates, or future revenue streams, or grant licenses on terms that are not favorable to us. We cannot assure you that we will be able to obtain additional funding if and when necessary. If we are unable to obtain adequate financing on a timely basis, we could be required to delay, scale back or eliminate one or more of our development programs or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves

Unstable market and economic conditions may have serious adverse consequences on our business and financial condition.

Global credit and financial markets experienced extreme disruptions at various points over the last decade, characterized by diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. If another such disruption in credit and financial markets and deterioration of confidence in economic conditions occurs, our business may be adversely affected. If the equity and credit markets were to deteriorate significantly in the future, it may make any necessary

debt or equity financing more difficult to complete, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and share price and could require us to delay or abandon development or commercialization plans. In addition, there is a risk that one or more of our current strategic partners, service providers, manufacturers and other partners would not survive or be able to meet their commitments to us under such circumstances, which could directly affect our ability to attain our operating goals on schedule and on budget.

We have not generated any revenue to date and may never be profitable.

We have devoted substantially all of our financial resources and efforts to developing our proprietary therapeutic platforms, identifying potential product candidates and conducting preclinical studies and a clinical trial. We and our partners are still in the early stages of developing our product candidates, and we have not completed development of any products. Our ability to become profitable depends upon our ability to generate revenue. To date, we have not generated any revenue. We do not expect to generate significant product revenue unless or until we successfully complete clinical development and obtain regulatory approval of, and then successfully commercialize, at least one of our product candidates. While XRx-008 and XRx-101 are advancing towards Phase 3 clinical trials, these product candidates will require additional preclinical studies or clinical development as well as regulatory review and approval, substantial investment, access to sufficient commercial manufacturing capacity and significant marketing efforts before we can generate any revenue from product sales. We face significant development risk as our product candidates advance further through clinical development. Our ability to generate revenue depends on a number of factors, including, but not limited to:

- timely completion of our preclinical studies and our current and future clinical trials, which may be significantly slower or more costly than we currently anticipate and will depend substantially upon the performance of third-party contractors;
- our ability to complete IND-enabling studies and successfully submit INDs or comparable applications to allow us to initiate clinical trials for our current or any future product candidates;
- whether we are required by the FDA or similar foreign regulatory authorities to conduct additional clinical trials or other studies beyond those planned to support the approval and commercialization of our product candidates or any future product candidates;
- our ability to demonstrate to the satisfaction of the FDA or similar foreign regulatory authorities the safety, efficacy, and acceptable risk-to-benefit profile of our product candidates or any future product candidates;
- the prevalence, duration and severity of potential side effects or other safety issues experienced with our product candidates or future product candidates, if any;
- the timely receipt of necessary marketing approvals from the FDA or similar foreign regulatory authorities;
- the willingness of physicians and patients to utilize or adopt any of our product candidates or future product candidates;
- our ability and the ability of third parties with whom we contract to manufacture adequate clinical and commercial supplies of our product candidates or any future product candidates, remain in good standing with regulatory authorities and develop, validate and maintain commercially viable manufacturing processes that are compliant with cGMP requirements;
- our ability to successfully develop a commercial strategy and thereafter commercialize our product candidates or any future product candidates in the United States and internationally, if licensed for marketing, reimbursement, sale and distribution in such countries and territories, whether alone or in collaboration with others; and
- our ability to establish and enforce intellectual property rights in and to our product candidates or any future product candidates.

Many of the factors listed above are beyond our control, and could cause us to experience significant delays or prevent us from obtaining regulatory approvals or commercialize our product candidates. Even if we are able to commercialize our product candidates, we may not achieve profitability soon after generating product sales, if ever. If

we are unable to generate sufficient revenue through the sale of our product candidates or any future product candidates, we may be unable to continue operations without continued funding.

Our limited operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We are a clinical-stage biopharmaceutical company with a limited operating history. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, conducting discovery and research activities, filing patent applications, identifying potential product candidates, initiating and conducting clinical trials, undertaking preclinical studies, in-licensing product candidates for development, and establishing arrangements with third parties for the manufacture of initial quantities of our product candidates and component materials. Our primary development program is at a late clinical stage. We have not yet demonstrated our ability to successfully complete any clinical trials, obtain marketing approvals, manufacture a commercial-scale product or arrange for a third party to do so on our behalf, or conduct sales, marketing and distribution activities necessary for successful product commercialization. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history.

In addition, as a young business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to transition at some point from a company with a research and development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Risks Related to Our Business and the Development of Our Product Candidates

We have a limited number of product candidates, all which are still in preclinical or early clinical development. If we do not obtain regulatory approval of one or more of our product candidates, or experience significant delays in doing so, our business will be materially adversely affected.

We currently have no product candidates approved for sale or marketing in any country, and may never be able to obtain regulatory approval for any of our product candidates. As a result, we are not currently permitted to market any of our product candidates in the United States or in any other country until we obtain regulatory approval from the U.S. Food and Drug Administration ("FDA") or comparable regulatory authorities outside the United States. Our product candidates are in various stages of development and we have not submitted an application, or received marketing approval, for any of our product candidates. Furthermore, the fact that our core competencies have been recognized through strategic partnerships does not improve our product candidates' outlook for regulatory approval. We have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. Obtaining regulatory approval of our product candidates will depend on many factors, including, but not limited to, the following:

- successfully completing formulation and process development activities;
- completing clinical trials that demonstrate the efficacy and safety of our product candidates;
- seeking and obtaining marketing approval from applicable regulatory authorities; and
- establishing and maintaining commercial manufacturing capabilities through relationships with third parties.

Many of these factors are wholly or partially beyond our control, including clinical advancement, the regulatory submission process and changes in the competitive landscape. If we do not achieve one or more of these factors in a timely manner, we could experience significant delays or an inability to develop our product candidates at all.

Clinical trials are very expensive, time consuming and difficult to design and implement and involve uncertain outcomes. Furthermore, the results of previous preclinical studies and early-stage clinical trials may not be predictive of future results. Initial results or observations in our ongoing clinical trials may not be indicative of results obtained when these trials are completed or in later stage trials.

Positive or timely results from preclinical or early-stage trials do not ensure positive or timely results in late-stage clinical trials or product approval by the FDA or comparable foreign regulatory authorities. We will be required to demonstrate with substantial evidence through well-controlled clinical trials that our product candidates are safe and

effective for their intended use(s) in a diverse population before we can seek regulatory approvals for their commercial sale. Our planned clinical trials may produce negative or inconclusive results, and we or any of our current and future strategic partners may decide, or regulators may require us, to conduct additional clinical or preclinical testing.

Success in preclinical studies or early-stage clinical trials does not mean that future clinical trials or registration clinical trials will be successful, or otherwise provide adequate data to demonstrate the safety and efficacy of a therapeutic candidate. Product candidates in later-stage clinical trials may fail to demonstrate sufficient safety and efficacy to the satisfaction of the FDA and non-U.S. regulatory authorities, despite having progressed through preclinical studies and initial clinical trials. Product candidates that have shown promising results in early clinical trials may still suffer significant setbacks in subsequent clinical trials or registration clinical trials. For example, a number of companies in the pharmaceutical industry, including those with greater resources and experience than us, have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier clinical trials. Similarly, interim results of a clinical trial do not necessarily predict final results. There can be no assurance that any of our clinical trials will ultimately be successful or support further clinical development, including development in registration-enabling trials, of any of our therapeutic candidates, and any setbacks in our clinical development could have a material adverse effect on our business and operating results.

If clinical trials for our product candidates are prolonged, delayed or stopped, we may be unable to obtain regulatory approval and commercialize our product candidates on a timely basis, or at all, which would require us to incur additional costs and delay our receipt of any product revenue.

We plan to initiate a Phase 3 clinical trial for XRx-008 in the treatment of autosomal dominant polycystic kidney disease, and Phase 1 clinical trials for XRx-101 in the treatment of COVID-19 infections. We may experience delays in our ongoing or future clinical trials, and we do not know whether future clinical trials will begin on time, need to be redesigned, enroll an adequate number of patients on time or be completed on schedule, if at all. The commencement or completion of these planned clinical trials could be substantially delayed or prevented by many factors, including:

- inability to generate satisfactory preclinical, toxicology or other in vivo or in vitro data capable of supporting the initiation or continuation of clinical trials;
- further discussions with the FDA or other regulatory agencies regarding the scope or design of our clinical trials;
- the limited number of, and competition for, suitable sites to conduct our clinical trials, many of which may already be engaged in other clinical trial programs, including some that may be for the same indication as our product candidates;
- any delay or failure to obtain approval or agreement from regulatory authorities to commence a clinical trial in any of the countries where enrollment is planned;
- inability to obtain sufficient funds required to finance a clinical trial;
- clinical holds on, or other regulatory objections to, a new or ongoing clinical trial;
- delay or failure to manufacture sufficient supplies of the product candidate for our clinical trials;
- delays in reaching agreement on acceptable terms with third-party manufacturers and the time for manufacture of sufficient quantities of our product candidates for use in clinical trials;
- delay or failure to reach agreement on acceptable clinical trial agreement terms or clinical trial protocols with prospective sites or clinical research organizations (“CROs”), the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical trial sites;
- delay or failure to obtain institutional review board, (“IRB”), approval to conduct a clinical trial at each prospective clinical trial site;
- slower than expected trial subject rates of patient recruitment and enrollment, or other failures to recruit and enroll subjects;
- failure of subjects to complete the clinical trial;

- the inability to enroll a sufficient number of subjects in studies to ensure adequate statistical power to detect statistically significant treatment effects;
- unforeseen safety issues, including severe or unexpected drug-related adverse effects experienced by clinical trial subjects, including possible deaths;
- lack of efficacy during clinical trials;
- termination of our clinical trials by one or more clinical trial sites;
- inability or unwillingness of subjects or clinical investigators to follow our clinical trial protocols;
- inability to monitor subjects adequately during or after treatment by us or our CROs;
- our CROs, clinical study sites or investigators failing to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all, deviating from the protocol or dropping out of a study;
- the need to repeat or terminate clinical trials as a result of inconclusive or negative results or unforeseen complications in testing; and
- our clinical trials may be suspended or terminated upon a breach or pursuant to the terms of any agreement with, or for any other reason by, current or future strategic partners that have responsibility for the clinical development of any of our product candidates.

Changes in regulatory requirements, policies and guidelines may also occur and we may need to significantly amend clinical trial protocols to reflect these changes with appropriate regulatory authorities. These changes may require us to renegotiate terms with CROs or resubmit clinical trial protocols to IRBs for re-examination, which may impact the costs, timing or successful completion of a clinical trial. Our clinical trials may be suspended or terminated at any time by the FDA, other regulatory authorities, the IRB overseeing the clinical trial at issue, any of our clinical trial sites with respect to that site, or us.

Any failure or significant delay in commencing or completing clinical trials for our product candidates would adversely affect our ability to obtain regulatory approval and our commercial prospects and ability to generate product revenue will be diminished.

If we experience delays or difficulties in the enrollment of subjects in clinical trials, we will be unable to complete these trials on a timely basis.

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States. Trial subject enrollment, a significant factor in the timing of clinical trials, is affected by many factors including:

- the severity of the disease under investigation;
- the size and nature of the patient population;
- the proximity and availability of clinical trial sites for prospective subjects;
- the eligibility criteria for the trial;
- the design of the clinical trial;
- our payments for conducting clinical trials;
- the patient referral practices of physicians;
- the ability to obtain and maintain research subject consents;
- competing clinical trials and clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies; and
- including any new drugs that may be approved for the indications we are investigating.

In particular, we are developing certain of our products for the treatment of rare diseases, which have limited pools of patients from which to draw for clinical testing. If we are unable to enroll a sufficient number of patients to complete clinical testing, we will be unable to gain marketing approval for such product candidates and our business will be harmed. Further, should any competitors have ongoing clinical trials for therapeutic candidates treating the same indications as our therapeutic candidates, patients who would otherwise be eligible for our clinical trials may instead enroll in clinical trials of our competitors' therapeutic candidates. Our inability to enroll a sufficient number of patients for any of our clinical trials could result in significant delays and could require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates and in delays to commercially launching our product candidates, if approved, which would materially harm our business.

The design or our execution of clinical trials may not support regulatory approval.

The design or execution of a clinical trial can determine whether its results will support regulatory approval and flaws in the design or execution of a clinical trial may not become apparent until the clinical trial is well advanced. In some instances, there can be significant variability in safety or efficacy results between different trials of the same product candidate due to numerous factors, including changes in trial protocols, differences in size and type of the patient populations, adherence to the dosing regimen and other trial protocols and the rate of dropout among clinical trial participants. We do not know whether any Phase 2, Phase 3 or other clinical trials we or any of our strategic partners may conduct will demonstrate consistent or adequate efficacy and safety to obtain regulatory approval to market our product candidates.

Further, the FDA and comparable foreign regulatory authorities have substantial discretion in the approval process and in determining when or whether regulatory approval will be obtained for any of our product candidates. Our product candidates may not be approved even if they achieve their primary endpoints in future Phase 3 clinical trials or registration trials. The FDA or other non-U.S. regulatory authorities may disagree with our trial design and our interpretation of data from preclinical studies and clinical trials. In addition, any of these regulatory authorities may change requirements for the approval of a product candidate even after reviewing and providing comments or advice on a protocol for a pivotal Phase 3 clinical trial that has the potential to result in FDA or other agencies' approval. In addition, any of these regulatory authorities may also approve a product candidate for fewer or more limited indications than we request or may grant approval contingent on the performance of costly post-marketing clinical trials. The FDA or other non-U.S. regulatory authorities may not approve the labeling claims that we believe would be necessary or desirable for the successful commercialization of our product candidates.

Our product candidates may have undesirable side effects that may delay or prevent marketing approval or, if approval is obtained, require them to be taken off the market, require them to include safety warnings or otherwise limit their sales.

Our products are in varied stages of development ranging from preclinical to late stage clinical trial development. All of our product candidates are required to undergo ongoing safety testing in humans through well-designed and IRB-approved clinical trials. However, not all adverse effects of product candidates can be predicted or anticipated. Unforeseen side effects from any of our product candidates could arise either during clinical development or, if approved by regulatory authorities, after the approved product has been marketed and is used by a greater number of patients.

The results of future clinical trials may show that our product candidates cause undesirable or unacceptable side effects, which could interrupt, delay or halt clinical trials, and result in delay of, or failure to obtain, marketing approval from the FDA and other regulatory authorities, or result in marketing approval from the FDA or other regulatory authorities with restrictive label warnings, limited patient populations or potential product liability claims. Even if we believe that our Phase 1 clinical trial and preclinical studies demonstrate the safety and efficacy of our product candidates, only the FDA or other comparable regulatory agencies may ultimately make such determination. No regulatory agency has made a determination that any of our product candidates are safe or effective for use for any indication.

If any of our product candidates receive marketing approval and we or others later identify undesirable or unacceptable side effects caused by such products:

- regulatory authorities may require us to take our approved product off the market;
- regulatory authorities may require the addition of labeling statements, specific warnings, a contraindications to the approved product's label or the dissemination of safety alerts to physicians, pharmacies, and patients;

- we may be required to change the way the product is administered, conduct additional clinical trials or develop a REMS for the product;
- we may be subject to limitations on how we may promote the product;
- sales of the product may decrease significantly;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

Any of these events could prevent us or our current or future strategic partners from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating revenue from the sale of any future products.

Changes in methods of product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates are developed through preclinical to late-stage clinical trials towards approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize processes and results. Such changes carry the risk that they will not achieve these intended objectives. FDA and other regulatory agencies may in some cases need to be informed of such changes, and they may require additional information or otherwise cause further delay in development programs. Any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials, or they may alter the safety or risk profile of the product candidate that could involve further FDA or other regulatory agency inquiries. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and jeopardize our ability, or our strategic partners' ability, to commence product sales and generate revenue in the future.

For our clinical trials that we may conduct at sites outside the United States, particularly in countries that are experiencing heightened impact from the COVID-19 pandemic, in addition to the risks listed above, we have also experienced, and may also in the future experience, the following adverse impacts:

- delays in receiving approval from local or centralized regulatory authorities to initiate our planned clinical trials;
- delays in clinical sites receiving the supplies and materials needed to conduct our clinical trials;
- interruption in global shipping that may affect the transport of clinical trial materials, such as investigational drug product and comparator drugs used in our clinical trials;
- changes in local regulations as part of a response to the COVID-19 pandemic, which may require us to change the ways in which our clinical trials are conducted, which may result in unexpected costs, or to discontinue the clinical trials altogether;
- delays in necessary interactions with local regulators, ethics committees and other important agencies and contractors due to limitations in employee resources or forced furlough of government employees; and
- the refusal of the FDA and Health Canada and other regulatory agencies to accept data from clinical trials in these affected geographies.

The global outbreak of the Sars-CoV-2 coronavirus that causes COVID-19 infections continues to rapidly evolve. The extent to which the COVID-19 pandemic may impact our business and clinical trials will depend on future developments, which are highly uncertain and cannot be predicted with confidence, such as the ultimate geographic spread of the disease, the duration of the outbreak, travel restrictions and social distancing in Canada and other countries, business closures or business disruptions and the effectiveness of actions taken in Canada and other countries to contain and treat the disease.

If we are unable to take full advantage of regulatory programs designed to expedite drug development or provide other incentives, our development programs may be adversely impacted.

There are a number of incentive programs administered by the FDA and other regulatory bodies to facilitate development of drugs in areas of unmet medical need, such as fast track designation and breakthrough therapy designation. Our product candidates may not qualify for or maintain designations under these or any of the other of FDA's existing or future programs to expedite drug development in areas of unmet medical need. Our inability to fully take advantage of these incentive programs may require us to run larger trials, incur delays, lose opportunities that may not otherwise be available to us, lose marketing exclusivity for which we would otherwise be eligible and incur greater expense in the development of our product candidates.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a product candidate, similar foreign regulatory authorities must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval and licensure procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining similar foreign regulatory approvals and compliance with similar foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified products and services from being developed, approved or commercialized in a timely manner, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept the payment of user fees, statutory, regulatory, and policy changes and other events that may otherwise affect FDA's ability to perform routine functions. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable.

Disruptions at the FDA and other agencies may also slow the time necessary for new drugs to be reviewed and/or approved or cleared by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities.

Separately, in response to the global pandemic of COVID-19 and public health emergency declaration in the U.S., on March 10, 2020 the FDA announced its intention to temporarily postpone most inspections of foreign manufacturing facilities and products, and it subsequently postponed routine surveillance inspections of domestic manufacturing facilities and provided guidance regarding the conduct of clinical trials. As of May 2021, the FDA noted it was continuing to ensure timely reviews of applications for prescription drug products during the COVID-19 pandemic in line with its user fee performance goals and conducting mission-critical domestic and foreign inspections to ensure compliance of manufacturing facilities with FDA quality standards. Utilizing a rating system to assist in determining

when and where it is safest to conduct such inspections based on data about the virus's trajectory in a given state and locality and the rules and guidelines that are put in place by state and local governments, FDA is either continuing to, on a case-by-case basis, conduct only mission-critical inspections, or, where possible to do so safely, resuming prioritized domestic inspections, which generally include pre-approval inspections. Foreign pre-approval inspections that are not deemed mission-critical remain postponed, while those deemed mission-critical will be considered for inspection on a case-by-case basis. FDA will use similar data to inform resumption of prioritized operations abroad as it becomes feasible and advisable to do so. The FDA may not be able to maintain this pace and delays or setbacks are possible in the future.

Should FDA determine that an inspection is necessary for NDA approval and an inspection cannot be completed during the review cycle due to restrictions on travel, FDA has stated that it generally intends to issue a complete response letter. Further, if there is inadequate information to make a determination on the acceptability of a facility, FDA may defer action on the application until an inspection can be completed. Additionally, regulatory authorities outside the United States may adopt similar restrictions or other policy measures in response to the COVID-19 pandemic. If a prolonged government shutdown occurs, or if global health concerns continue to prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews, or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process regulatory submissions, which could have a material adverse effect on our business. Further, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Our development and regulatory approval strategy in the U.S. depends, in part, on published scientific literature and the FDA's prior findings regarding the safety and efficacy of approved products. If the FDA concludes that our product candidates do not meet the requirements of Section 505(b)(2), approval of such product candidates may be delayed, limited or denied, any of which would adversely affect our ability to generate operating revenues.

The Hatch-Waxman Amendments added section 505(b)(2) to the FDCA, as well as several other provisions. Section 505(b)(2) of the FDCA permits the filing of an NDA where at least some of the information required for approval comes from investigations that were not conducted by or for the applicant and for which the applicant has not obtained a right of reference or use from the person by or for whom the investigations were conducted. The FDA interprets section 505(b)(2) of the FDCA, for the purposes of approving an NDA, to permit the applicant to rely, in part, upon published literature or the FDA's previous findings of safety and efficacy for an approved product. The FDA may also require the applicant to perform additional clinical trials or measurements to support any deviation from the previously approved product. The FDA may then approve the new product candidate for all or some of the label indications for which the referenced product has been approved, as well as for any new indication sought by the section 505(b)(2) applicant. The FDA may require an applicant's product label to have all or some of the limitations, contraindications, warnings or precautions included in the reference product's label, including a black box warning, or may require the label to have additional limitations, contraindications, warnings or precautions. We plan to use the 505(b)(2) NDA pathway for our future marketing application, if the ongoing clinical trials of our product candidates are successful and the totality of the data collected are sufficient to support NDA approval.

If the FDA determines that our product candidates do not meet the requirements of Section 505(b)(2) we may need to conduct additional clinical trials, provide additional data and information and meet additional standards for regulatory approval applicable to a traditional NDA submitted pursuant to Section 505(b)(1). If our product candidates do not meet the requirements of Section 505(b)(2) of the FDCA or are otherwise ineligible for approval via the Section 505(b)(2) regulatory pathway, the time and financial resources required to obtain FDA approval for these product candidates, and the complications and risks associated with these product candidates, would likely substantially increase. Moreover, a 505(b)(2) application will not be approved until any non-patent exclusivity listed in the FDA publication Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book, for the listed drug, or for any other drug with the same protected conditions of approval as our product, has expired. An inability to pursue the Section 505(b)(2) regulatory pathway would likely result in new competitive products reaching the market more quickly than our product candidates, which would likely materially adversely impact our competitive position and prospects. Even if we are allowed to pursue the Section 505(b)(2) regulatory pathway, we cannot assure you that our product candidates will receive the requisite approvals for commercialization.

Notwithstanding the approval of many products by the FDA pursuant to Section 505(b)(2), over the last few years, some pharmaceutical companies and other actors have objected to the FDA's interpretation of Section 505(b)(2) of the

FDCA to allow reliance on the FDA's prior findings of safety and effectiveness. If the FDA changes its interpretation of Section 505(b)(2), or if the FDA's interpretation is successfully challenged in court, this could delay or even prevent the FDA from approving any Section 505(b)(2) application that we submit in the future. Moreover, the FDA has adopted an interpretation of the three-year exclusivity provisions whereby a 505(b)(2) application can be blocked by exclusivity even if it does not rely on the previously-approved drug that has exclusivity (or any safety or effectiveness information regarding that drug). Under the FDA's interpretation, the approval of one or more of our product candidates may be blocked by exclusivity awarded to a previously-approved drug product that shares certain innovative features with our product candidates, even if our 505(b)(2) application does not identify the previously-approved drug product as a listed drug or rely upon any of its safety or efficacy data. Any failure to obtain regulatory approval of our product candidates would significantly limit our ability to generate revenues, and any failure to obtain such approval for all of the indications and labeling claims we deem desirable could reduce our potential revenues.

Moreover, even if these product candidates are approved under the Section 505(b)(2) regulatory pathway the approval may be subject to limitations on the indicated uses for which the products may be marketed or to other conditions of approval, or may contain requirements for costly post-marketing testing and surveillance to monitor the safety or efficacy of the products.

Risks Related to Our Business and the Commercialization of Our Product Candidates

Even if we complete the necessary clinical trials for our product candidates, the marketing approval process is expensive, time consuming and uncertain and may prevent us from obtaining approvals for the commercialization of our product candidates. If we are not able to obtain, or if there are delays in obtaining, required marketing approvals, we will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired.

To date, we have not received approval from the FDA or regulatory authorities in other jurisdictions to market any of our product candidates for any indications. Securing marketing approval requires the submission of extensive preclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication in the relevant patient population to establish the product candidate's safety and effectiveness for that indication. Securing marketing approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the regulatory authorities. Regulatory authorities may determine that our unapproved product candidates or any potential future product candidate is not effective, is only moderately effective or has undesirable or unintended side effects, toxicities, safety profiles or other characteristics that preclude us from obtaining marketing approval for the product or that limit or restrict its commercial use.

The process of obtaining marketing approvals is expensive, may take many years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable. If we experience delays in obtaining approval or if we fail to obtain approval of our product candidates, the commercial prospects for our product candidates may be harmed and our ability to generate revenues will be materially impaired.

We may be unable to obtain regulatory approval for our product candidates under applicable regulatory requirements. The denial or delay of any such approval would delay commercialization of our product candidates and adversely impact our potential to generate revenue, our business and our results of operations.

The research, testing, manufacturing, labeling, licensure, sale, marketing and distribution of small molecule products are subject to extensive regulation by the FDA and similar regulatory authorities in the United States and other countries, and such regulations differ from country to country. We are not permitted to market our product candidates in the United States or in any foreign countries until they receive the requisite marketing approval from the applicable regulatory authorities of such jurisdictions.

The FDA and similar foreign regulatory authorities can delay, limit or deny marketing authorization of our product candidates for many reasons, including any one or more of the following:

- our inability to demonstrate to the satisfaction of the FDA or similar foreign regulatory authority that any of our product candidates are safe and effective for their proposed indications;
- the FDA's or the applicable foreign regulatory agency's disagreement with our trial protocols, trial designs or implementation of the trials;
- the FDA or similar foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- our inability to demonstrate that the clinical and other benefits of any of our product candidates outweigh any safety or other perceived risks;
- the FDA's or the applicable foreign regulatory agency's requirement for additional preclinical studies or clinical trials;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or similar foreign regulatory authorities for marketing approval, or that regulatory agencies may require us to include a larger number of patients than we anticipated;
- upon review of our clinical trial sites and data, the FDA or comparable foreign regulatory authorities may find our record keeping or the record keeping of our clinical trial sites to be inadequate or may identify other GCP deficiencies related to the trials;
- the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies may fail to meet the requirements of the FDA or comparable foreign regulatory authorities;
- the quality of our product candidates or other materials necessary to conduct preclinical studies or clinical trials of our product candidates, including any potential companion diagnostics, may be insufficient or inadequate;
- the medical standard of care or the approval policies or regulations of the FDA or similar foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for marketing approval; or
- the data collected from clinical trials of our product candidates may not be sufficient to the satisfaction of the FDA or comparable foreign regulatory authorities to support the submission of a new drug application or other comparable marketing submissions in foreign jurisdictions or to obtain approval of our product candidates in the United States or elsewhere.

Any of these factors, many of which are beyond our control, may result in our failing to obtain regulatory approval to market any of our product candidates, which would significantly harm our business, results of operations and prospects. Of the large number of small molecule products in development, only a small percentage successfully complete the FDA or similar regulatory approval processes and are commercialized. Even if we eventually complete clinical testing and receive marketing authorization from the FDA or similar foreign regulatory authorities for any of our product candidates, the FDA or similar foreign regulatory agency may grant approval contingent on the performance of costly additional clinical trials which may be required after approval. The FDA or similar foreign regulatory agency also may approve our product candidates for a more limited indication or a narrower patient population than we originally requested, and the FDA similar other foreign regulatory agency, may not approve our product candidates with the labeling that we believe is necessary or desirable for the successful commercialization of such product candidates.

In addition, even if the trials are successfully completed, preclinical and clinical data are often susceptible to varying interpretations and analyses, and we cannot guarantee that the FDA or similar foreign regulatory authorities will interpret the results as we do, and more clinical trials could be required before we submit our product candidates for approval. To the extent that the results of the clinical trials are not satisfactory to the FDA or similar foreign regulatory authorities for support of a marketing application, approval of our product candidates may be significantly

delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional clinical trials in support of potential approval of our product candidates.

Any delay in obtaining, or inability to obtain, applicable regulatory approval would delay or prevent commercialization of our product candidates and would materially adversely impact our business and prospects.

We face significant competition and if our competitors develop and market products that are more effective, safer or less expensive than our product candidates, our commercial opportunities will be negatively impacted.

The life sciences industry is highly competitive and subject to rapid and significant technological change. We are currently developing product candidates that will compete with other drugs and therapies that currently exist or are being developed. Products we may develop in the future are also likely to face competition from other drugs and therapies, some of which we may not currently be aware. We have competitors both in the United States and internationally, including major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies, universities and other research institutions. Many of our competitors have significantly greater financial, manufacturing, marketing, drug development, technical and human resources than we do. Large pharmaceutical companies, in particular, have extensive experience in clinical testing, obtaining regulatory approvals, recruiting patients and in manufacturing pharmaceutical products. These companies also have significantly greater research and marketing capabilities than we do and may also have products that have been approved or are in late stages of development and collaborative arrangements in our target markets with leading companies and research institutions. Established pharmaceutical companies may also invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make the product candidates that we develop obsolete. As a result of all of these factors, our competitors may succeed in obtaining patent protection or FDA approval or discovering, developing and commercializing products in our field before we do.

Specifically, there are a large number of companies developing or marketing treatments for polycystic kidney disease, AKI, COVID-19 infection and diabetes, including many major pharmaceutical and biotechnology companies. These treatments consist both of small molecule drug products, as well as biologics that work by using next-generation antibody therapeutic platforms to address specific metabolic targets. In addition, other companies including Pfizer, Teijin, Takeda, Merck, are developing new treatments for cardiovascular, kidney disease or diabetes that may affect the progression of acute, intermittent or chronic kidney disease.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for our product candidates, which could result in our competitors establishing a strong market position before we are able to enter the market.

Smaller and other early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third-parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. In addition, the pharmaceutical industry is characterized by rapid technological change. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Technological advances or products developed by our competitors may render our technologies or product candidates obsolete, less competitive or not economical.

Our product candidates, for which we intend to seek approval, may face competition sooner than anticipated.

Even if we are successful in achieving regulatory approval to commercialize a product candidate ahead of our competitors, our future pharmaceutical products may face direct competition from generic and other follow-on drug products. Any of our product candidates that may achieve regulatory approval in the future may face competition from generic products earlier or more aggressively than anticipated, depending upon how well such approved products perform in the United States prescription drug market. Our ability to compete may also be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic products. Generic products are expected to become available over the coming years. Even if our product candidates achieve marketing approval, they may be priced at a significant premium over competitive generic products, if any have been approved by then.

In addition to creating the 505(b)(2) NDA pathway, the Hatch-Waxman Amendments to the FDCA authorized the FDA to approve generic drugs that are the same as drugs previously approved for marketing under the NDA provisions of the statute pursuant to ANDAs. An ANDA relies on the preclinical and clinical testing conducted for a previously approved reference listed drug ("RLD"), and must demonstrate to the FDA that the generic drug product is identical to the RLD with respect to the active ingredients, the route of administration, the dosage form, and the strength of the drug and also that it is "bioequivalent" to the RLD. The FDA is prohibited by statute from approving an ANDA when certain marketing or data exclusivity protections apply to the RLD. If any such competitor or third party is able to demonstrate bioequivalence without infringing our patents, then this competitor or third party may then be able to introduce a competing generic product onto the market.

We cannot predict the interest of potential follow-on competitors or how quickly others may seek to come to market with competing products, whether approved as a direct ANDA competitor or as a 505(b)(2) NDA referencing one of our future product candidates. If the FDA approves generic versions of our product candidates in the future, should they be approved for commercial marketing, such competitive products may be able to immediately compete with us in each indication for which our product candidates may have received approval, which could negatively impact our future revenue, profitability and cash flows and substantially limit our ability to obtain a return on our investments in those product candidates.

If any of our product candidates receive regulatory approval, the approved products may not achieve broad market acceptance among physicians, patients, the medical community and third-party payors, in which case revenue generated from their sales would be limited.

Our product candidates are in preclinical and clinical development, and we may never have an approved product that is commercially successful. Even when available on the market, the commercial success of our product candidates will depend upon their acceptance among physicians, patients and the medical community. The degree of market acceptance of our product candidates will depend on a number of factors, many of which are beyond our control, including but not limited to:

- limitations, precautions, or warnings contained in the approved summary of product characteristics, patient information leaflet, prescribing information, or instructions for use;
- changes in the standard of care for the targeted indications for any approved products;
- limitations in the approved clinical indications for our approved products;
- demonstrated clinical safety and efficacy compared to other products;
- lack of significant adverse side effects, or the prevalence and severity of adverse events;
- sales, marketing and distribution support;
- availability of coverage and reimbursement amounts from managed care plans and other third-party payors;
- timing of market introduction and perceived effectiveness of competitive products;
- the cost-effectiveness of our approved products;
- availability of alternative therapies at similar or lower cost, including generic and over-the-counter products; the extent to which the product candidate is approved for inclusion on formularies of hospitals and managed care organizations;
- whether the product is designated under physician treatment guidelines as a first-line therapy or as a second- or third-line therapy for particular diseases;
- whether the product can be used effectively with other therapies to achieve higher response rates;
- adverse publicity about our approved products or favorable publicity about competitive products;

- relative convenience, ease of use, ease of administration and other perceived advantages of our products over alternative products; and
- potential product liability claims.

Even if any of our product candidates are approved, they may not achieve an adequate level of acceptance by physicians, patients and the medical community, such that we may not generate sufficient revenue from these products and we may not become or remain profitable. In addition, efforts to educate the medical community and third-party payors on the benefits of our products may require significant resources and may never be successful, which would prevent us from generating significant revenue or becoming profitable.

We may seek orphan drug status for one or more of our product candidates, but even if it is granted, we may be unable to maintain any benefits associated with orphan drug status, including market exclusivity in specific indications for XRx-008 or XRx-101 or in future product candidates that we may develop. If our competitors are able to obtain orphan product exclusivity for their products in specific indications, we may not be able to have competing products approved in those indications by the applicable regulatory authority for a significant period of time.

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a product candidate as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States. We may seek Orphan Drug Designation for specific indications for XRx-008 and XRx-101 and potentially for additional product candidates in the future. Orphan Drug Designation neither shortens the development time or regulatory review time of a product candidate nor gives the drug any advantage in the regulatory review or approval process.

We may seek orphan drug status for one or more of our product candidates, but the FDA may not approve any such request. Even if the FDA grants orphan drug status to one or more of our candidates, exclusive marketing rights in the United States may be limited if we seek FDA marketing approval for an indication broader than the orphan designated indication. Even if we obtain orphan drug exclusivity upon approval of XRx-008 or XRx-101 for designated orphan indications, or for any other product candidates and orphan indications that receive an Orphan Drug Designation in the future, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition. Further, in the United States, even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition submitted by a competitor if the FDA concludes that the later drug is clinically superior in that it is shown exhibit greater safer in a substantial portion of the target population, greater effectiveness, or (in unusual cases) otherwise makes a major contribution to patient care. Accordingly, others may obtain orphan drug status for products addressing the same diseases or conditions as products we are developing, thus limiting our ability to compete in the markets addressing such diseases or conditions for a significant period of time.

Even if we obtain FDA approval of any of our product candidates, we may never obtain approval or commercialize such products outside of the United States, which would limit our ability to realize their full market potential.

In order to market any products outside of the United States, we must establish and comply with numerous and varying regulatory requirements of other countries regarding the safety and efficacy or prescription drug products. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not mean that regulatory approval will be obtained in any other country. Approval procedures vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory approvals could result in significant delays, difficulties and costs for us and may require additional preclinical studies or clinical trials which would be costly and time consuming. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of our products in those countries. Satisfying these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. In addition, our failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in other countries. We do not have any product candidates approved for sale in any jurisdiction, including international markets, and we do not have experience in obtaining regulatory approval in international markets. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, our target market will be reduced and our ability to realize the full market potential of our products will be harmed.

Unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives could harm our business in the future.

There is increasing pressure on biotechnology companies to reduce healthcare costs. In the United States, these pressures come from a variety of sources, such as managed care groups and institutional and government purchasers. Increased purchasing power of entities that negotiate on behalf of federal healthcare programs and private sector beneficiaries could increase pricing pressures in the future. Such pressures may also increase the risk of litigation or investigation by the government regarding pricing calculations. The biotechnology industry will likely face greater regulation and political and legal actions in the future.

Adverse pricing limitations may hinder our ability to recoup our investment in one or more future product candidates, even if our future product candidates obtain regulatory approval. Adverse pricing limitations prior to approval will also adversely affect us by reducing our commercial potential. Our ability to commercialize any potential products successfully also will depend in part on the extent to which coverage and reimbursement for these products and related treatments becomes available from third-party payors, including government health administration authorities, private health insurers and other organizations. Third-party payors decide which medications they will pay for and establish reimbursement levels. In addition, companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, will apply to companion diagnostics.

A significant trend in the U.S. healthcare industry and elsewhere is cost containment. Third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that coverage and reimbursement will be available for any product that we commercialize in the future and, if reimbursement is available, what the level of reimbursement will be. Reimbursement may impact the demand for, or the price of, any product for which we obtain marketing approval in the future. If reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any product candidate that we successfully develop.

There may be significant delays in obtaining reimbursement for approved products, and coverage may be more limited than the purposes for which the product is approved by the FDA or regulatory authorities in other countries. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Payment rates may vary according to the use of the product and the clinical setting in which it is used, may be based on payments allowed for lower cost products that are already reimbursed and may be incorporated into existing payments for other services. Net prices for products may be reduced by mandatory discounts or rebates required by third-party payors and by any future relaxation of laws that presently restrict imports of products from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies, but also have their own methods and approval process apart from Medicare coverage and reimbursement determinations. Accordingly, one third-party payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. Our inability to promptly obtain coverage and adequate reimbursement from third-party payors for approved products could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize potential products and our overall financial condition.

If the market opportunities for any product that we or our strategic partners develop are smaller than we believe they are, our revenue may be adversely affected and our business may suffer.

We intend to initially focus our independent product candidate development on treatments for autosomal dominant polycystic kidney disease and AKI due to COVID-19 infections. Our projections of addressable patient populations that have the potential to benefit from treatment with our product candidates are based on estimates. If any of the foregoing estimates are inaccurate, the market opportunities for any of our product candidates could be significantly diminished and have an adverse material impact on our business.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus on research programs, therapeutic platforms and product candidates that we identify for specific indications. As a result, we may forego or delay pursuit of opportunities with other therapeutic platforms or product candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs, therapeutic platforms and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights.

We may not be successful in our efforts to use and expand our therapeutic platforms to build a pipeline of product candidates.

An important element of our strategy is to use and expand our therapeutic platforms to build a pipeline of product candidates and progress these product candidates through clinical development for the treatment of multiple diseases. Although our research and development efforts to date have resulted in a pipeline of product candidates directed at various diseases, we may not be able to develop product candidates that are safe and effective. In addition, although we expect that our therapeutic platforms will allow us to develop a steady stream of product candidates, they may not prove to be successful at doing so. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. If we do not continue to successfully develop and begin to commercialize product candidates, we will face difficulty in obtaining product revenue in future periods, which could result in significant harm to our financial position and adversely affect our share price.

Even if we receive regulatory approval to commercialize any of the product candidates that we develop, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. If we fail to comply with United States and foreign regulatory requirements, regulatory authorities could limit or withdraw any marketing or commercialization approvals we may receive and subject us to other penalties. Any unfavorable regulatory action may materially and adversely affect our future financial condition and business operations.

Even if we receive marketing and commercialization approval for a product candidate, we will be subject to continuing post-marketing regulatory requirements. Our potential products, further development activities and manufacturing and distribution of a future product, once developed and determined, will be subject to extensive and rigorous regulation by numerous government agencies, including the FDA and comparable foreign agencies. To varying degrees, each of these agencies monitors and enforces our compliance with laws and regulations governing the development, testing, manufacturing, labeling, marketing, distribution, and the safety and effectiveness of our therapeutic candidates and, if approved, our future products. The process of obtaining marketing approval or clearance from the FDA and comparable foreign bodies for new products, or for enhancements, expansion of the indications or modifications to existing products, could:

- take a significant, indeterminate amount of time;
- require the expenditure of substantial resources;
- involve rigorous preclinical and clinical testing, and possibly post-market surveillance;
- require design changes of our potential products; or
- result in our never being granted the regulatory approval we seek.

Any of these occurrences may cause our operations or potential for success to suffer, harm our competitive standing and result in further losses that adversely affect our financial condition. In addition, any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the

product may be marketed or subject to certain conditions of approval, and may contain requirements for potentially costly post-approval trials, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the marketed product.

The FDA, as well as its foreign regulatory counterparts, also have significant post-market authority, including the authority to require labeling changes based on new safety information and to require post-market studies or clinical trials to evaluate safety risks related to the use of a product or to require withdrawal of the product from the market. We will be required to report adverse reactions and production problems, if any, to the FDA and comparable foreign regulatory authorities. Any new legislation addressing drug safety issues could result in delays in product development or commercialization, or increased costs to assure compliance. Additionally, the FDA regulates the promotional claims that may be made about prescription products, such as our products, if approved. In particular, a product may not be promoted for uses that are not approved by the FDA as reflected in the product's approved labeling. However, we may share truthful and not misleading information with healthcare providers and payors that is otherwise consistent with the product's FDA approved labeling.

We will have ongoing responsibilities under these and other FDA and international regulations, both before and after a product is approved and commercially released. Compliance with applicable regulatory requirements is subject to continual review and is monitored rigorously through periodic inspections by the FDA and foreign regulatory agencies. In addition, manufacturers and manufacturers' facilities are required to continuously comply with FDA and comparable foreign regulatory authority requirements, including ensuring quality control and manufacturing procedures conform to cGMP regulations and corresponding foreign regulatory manufacturing requirements. Accordingly, we and our contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any NDA submission to the FDA or any other type of domestic or foreign marketing application.

If a regulatory agency discovers previously unknown problems with a future product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or it disagrees with the promotion, marketing or labeling of a product, the regulatory agency may impose restrictions on that product or on us, including requiring withdrawal of the product from the market. Accordingly, if we or our collaborators, manufacturers or service providers fail to comply with applicable continuing regulatory requirements in the United States or foreign jurisdictions in which we seek to market our products, we or they may be subject to, among other things:

- restrictions on the marketing or manufacturing of the product;
- withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters, adverse regulatory inspection findings, or holds on clinical trials;
- delay of approval or refusal by the FDA or another applicable regulatory authority to approve pending applications or supplements to approved applications filed by us or our strategic partners;
- suspension or revocation of a product's regulatory approvals;
- product seizure or administrative detention of products, or refusal to permit the import or export of products; and
- operating restrictions, exclusion of eligibility from government contracts, injunctions or the imposition of civil or criminal penalties or prosecution.

Occurrence of any of the foregoing could have a material and adverse effect on our business and results of operations. Any adverse regulatory action, depending on its magnitude, may restrict us from effectively commercializing our potential products and harm our business, and any government investigation of alleged violations of law would require us to expend significant time and resources in response and could generate adverse publicity. In addition, negative publicity and product liability claims resulting from any adverse regulatory action or government investigation could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Further, the FDA's or other regulatory authority's policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. If we are slow or

unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained, which would adversely affect our business, prospects and ability to achieve or sustain profitability.

Our business entails a significant risk of product liability and our ability to obtain sufficient insurance coverage could have a material and adverse effect on our business, financial condition, results of operations and prospects. If any product liability lawsuits are successfully brought against us or any of our strategic partners, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.

We are exposed to significant product liability risks inherent in the development, testing, manufacturing and marketing of investigational product candidates for which we or our collaborators may conduct clinical trials. In particular, we face an inherent risk of product liability lawsuits related to the testing of our product candidates in seriously ill patients, and will face an even greater risk if product candidates are approved by regulatory authorities and introduced commercially. Product liability claims may be brought against us or our strategic partners by participants enrolled in our clinical trials, as well as patients, healthcare providers or others using, administering or selling any of our future approved products. Product liability claims could delay or prevent completion of our development programs. If we succeed in marketing any approved products, these claims could result in an FDA investigation of the safety and effectiveness of our future commercial products, our manufacturing processes and facilities (or the manufacturing processes and facilities of our third-party manufacturers) or our marketing programs, a recall of our products or more serious enforcement action, limitations on the approved indications for which the product may be used or suspension or withdrawal of approvals.

If we cannot successfully defend ourselves against any such claims, we may incur substantial liabilities. Regardless of their merit or eventual outcome, liability claims may result in:

- decreased demand for any future approved products;
- injury to our reputation;
- withdrawal of clinical trial participants;
- termination of clinical trial sites or entire trial programs;
- increased regulatory scrutiny;
- significant litigation costs;
- substantial monetary awards to or costly settlement with patients or other claimants;
- product recalls or a change in the indications for which products may be used;
- loss of revenue;
- a decline in our stock price;
- diversion of management and scientific resources from our business operations; and
- the inability to commercialize our product candidates.

If any of our product candidates are approved for commercial sale, we will be highly dependent upon consumer perceptions of us and the safety and quality of our products. We could be adversely affected if we are subject to negative publicity. We could also be adversely affected if any of our products or any similar products manufactured and distributed by other companies prove to be, or are asserted to be, harmful to patients. Because of our dependence upon consumer perceptions, any adverse publicity associated with illness or other adverse effects resulting from patients' use or misuse of our products or any similar products distributed by other companies could have a material adverse impact on our financial condition or results of operations. Any insurance we have or may obtain may not provide sufficient coverage against potential liabilities. Furthermore, clinical trial and product liability insurance is becoming increasingly expensive.

We may need to have in place increased product liability coverage when we begin the commercialization of our product candidates.

Insurance coverage is becoming increasingly expensive. As a result, we may be unable to maintain or obtain sufficient insurance at a reasonable cost to protect us against losses that could have a material adverse effect on our business. A successful product liability claim or series of claims brought against us, particularly if judgments exceed any insurance coverage we may have, could decrease our cash resources and adversely affect our business, financial condition and results of operation.

Security breaches, loss of data and other disruptions could compromise sensitive information related to our business or protected health information or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.

In the ordinary course of our business, we collect and store terabytes of sensitive data, including legally protected health information, personally identifiable information, intellectual property and proprietary business information owned or controlled by ourselves or our strategic partners. We manage and maintain our applications and data by utilizing a combination of on-site systems, managed data center systems and cloud-based data center systems. These applications and data encompass a wide variety of business-critical information, including research and development information, commercial information and business and financial information. The primary risks we face relative to protecting this critical information include loss of access risk, inappropriate disclosure risk, inappropriate modification risk and the risk of being unable to adequately monitor our controls over the first three risks.

The secure processing, storage, maintenance and transmission of this critical information are vital to our operations and business strategy, and we devote significant resources to protecting such information. Although we take measures to protect sensitive information from unauthorized access or disclosure, our information technology and infrastructure and that of any third-party billing and collections provider we may utilize, may be vulnerable to attacks by hackers or viruses or breached due to employee error, malfeasance or other disruptions. Any such breach or interruption could compromise our networks and the information stored there could be accessed by unauthorized parties, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, such the federal privacy rules for health information promulgated under the Health Insurance Portability and Accountability Act of 1996 (HIPAA) or state securities laws, and regulatory penalties. We are in the process of implementing security measures to prevent unauthorized access to our valuable trade secrets, patient data, and other confidential information, there is no guarantee that we can continue to protect our systems from breach. Unauthorized access, loss or dissemination could also disrupt our operations, including our ability to conduct our analyses, provide test results, bill payors or providers, process claims and appeals, conduct research and development activities, collect, process and prepare company financial information, provide information about any future products, manage the administrative aspects of our business and damage our reputation, any of which could adversely affect our business.

The U.S. Office of Civil Rights in the Department of Health and Human Services enforces the HIPAA privacy and security rules and may impose penalties on us or our CROs if we, or our CROs, do not fully comply with requirements of HIPAA. Penalties will vary significantly depending on factors such as whether we, or our CROs, knew or should have known of the failure to comply, or whether our failure, or that of our CROs, to comply was due to willful neglect. These penalties include civil monetary penalties of $100 to $50,000 per violation, up to an annual cap of $1,500,000 for identical violations. A person who knowingly obtains or discloses individually identifiable health information in violation of HIPAA may face a criminal penalty of up to $50,000 per violation and up to one-year imprisonment. The criminal penalties increase to $100,000 per violation and up to five years imprisonment if the wrongful conduct involves false pretenses, and to $250,000 per violation and up to 10-years imprisonment if the wrongful conduct involves the intent to sell, transfer, or use identifiable health information for commercial advantage, personal gain, or malicious harm. The U.S. Department of Justice is responsible for criminal prosecutions under HIPAA. Furthermore, in the event of a breach as defined by HIPAA, we have specific reporting requirements to the Office of Civil Rights under the HIPAA regulations as well as to affected individuals, and we may also have additional reporting requirements to other state and federal regulators, including the attorney generals of various states, the Federal Trade Commission, and to the media. Depending on the data breached, we may also be obligated under the laws of certain states to provide credit monitoring services to affected individuals for a year or more. Issuing such notifications and providing such service can be costly, time and resource intensive, and can generate significant negative publicity. Breaches of HIPAA or state data protection laws may also constitute contractual violations that could lead to contractual damages or terminations.

In addition, the interpretation and application of consumer, health-related and data protection laws in the United States, the European Union, or EU, and elsewhere are often uncertain, contradictory and in flux. It is possible that these laws may be interpreted and applied in a manner that is inconsistent with our practices. If so, this could result in government-imposed fines or orders requiring that we change our practices, which could adversely affect our business. In addition, these privacy and security regulations vary between states, may differ significantly from country to country, and may vary based on whether testing or processing of data is performed in the United States or in the local country. Complying with these various laws could cause us to incur substantial costs or require us to change our business practices and compliance procedures in a manner adverse to our business.

For example, under the EU General Data Protection Regulation ("GDPR") we would be obligated to ensure that we maintain appropriate technical and organizational measures to ensure a level of security appropriate to the risk for all personal data, and heightened measures for health-related information, which can pose a significant risk to individuals if it is breached or otherwise compromised. The GDPR also contains numerous complex requirements, with requirements, which we may inadvertently fail to achieve despite our reasonable efforts. Violations of the GDPR may result in fines up to up €20 million, or 4% of the previous financial year's worldwide annual revenue, whichever is the higher of the two.

We may also be subject to litigation for data security breaches under various state laws. The California Consumer Privacy Act ("CCPA"), which has been effective only since January 1, 2020, has already resulted in numerous class action lawsuits for companies suffering data breaches in which they are accused of failing to use reasonable security measures to protect the personal information of California residents. In addition, if we violate the CCPA and we are not able to cure the violation within thirty (30) days of notice, we may be subject to penalties ranging from $2,500 for a non-intentional violation to $7,500 for an intentional violation. Many other states are in the process of adopting similar laws, so we may potentially face litigation and penalties under the laws of other states as well.

Furthermore, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on other third parties for the manufacture of our product candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business.

Current and future legislation may increase the difficulty and cost for us to commercialize any products that we or our strategic partners develop and affect the prices we may obtain.

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change healthcare systems in ways that could affect our ability to sell any of our product candidates profitably, if such product candidates are approved for sale. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. Moreover, among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access.

In addition, there has been heightened governmental scrutiny recently over the manner in which drug manufacturers set prices for their marketed products, which have resulted in several Congressional inquiries and proposed bills designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In December 2020, the U.S. Supreme Court held unanimously that federal law does not preempt the states' ability to regulate pharmaceutical benefit managers (PBMs) and other members of the healthcare and pharmaceutical supply chain, an important decision that may lead to further and more aggressive efforts by states in this area.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such

changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-approval testing and other requirements.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we or our strategic partners are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or our strategic partners are not able to maintain regulatory compliance, our product candidates may lose any marketing approval that may have been obtained and we may not achieve or sustain profitability, which would adversely affect our business.

We are subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Compliance with these legal standards could impair our ability to compete in domestic and international markets. We can face criminal liability and other serious consequences for violations which can harm our business.

We are subject to laws and regulations affecting international trade and transactions administered by the U.S. Government and other governments in the jurisdictions in which we conduct business, including but not limited to the U.S. Export Administration Regulations, U.S. Customs Regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Control, the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. International Travel Act of 1977, and various anti-money laundering laws and regulations. Anti-corruption laws are interpreted broadly and generally prohibit companies and their employees, agents, contractors, and other representatives from authorizing, promising, offering, or providing, directly or indirectly, payments or anything else of value to recipients in the public sector for the purpose of influencing official action or decision, inducing an unlawful act, inducing official influence over government action, or securing an improper advantage. We may engage third parties for clinical trials outside of the United States, to sell our products abroad once we enter a commercialization phase, or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. We may have direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. We can be held liable for the illegal activities of our employees, agents, contractors, and other representatives, even if we do not explicitly authorize or have actual knowledge of such activities. Any violation of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment from participation in government procurements, tax reassessments, civil litigation, reputational harm, and other consequences.

We currently have no marketing and sales organization and have no experience in marketing prescription drug products. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our product candidates, if approved for commercial sale, we may not be able to generate product revenue.

We currently have no sales, marketing or distribution capabilities in any country and have no experience in marketing products. We intend to develop an in-house marketing organization and sales force, which will require significant capital expenditures, management resources and time. We will have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel.

If we are unable or decide not to establish internal sales, marketing and distribution capabilities, we will pursue collaborative arrangements regarding the sales and marketing of our products, if licensed. However, there can be no assurance that we will be able to establish or maintain such collaborative arrangements, or if we are able to do so, that they will have effective sales forces. Any revenue we receive will depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from product sales may be lower than if we had commercialized our product candidates ourselves. We also face competition in our search for third parties to assist us with the sales and marketing efforts of our product candidates.

There can be no assurance that we will be able to develop in-house sales and distribution capabilities or establish or maintain relationships with third-party collaborators to commercialize any product in the United States or overseas for which we are able to obtain regulatory approval.

COVID-19 pandemic may materially and adversely affect our business and financial results

Our business could be adversely affected by health epidemics in regions where we have clinical trial sites or other business operations, and could cause significant disruption in the operations of third-party manufacturers and CROs upon whom we rely. In December 2019, a novel strain of coronavirus, which causes the disease known as COVID-19, was reported to have surfaced in Wuhan, China. Since then, the novel strain of coronavirus has spread globally. In March 2020, the World Health Organization declared the COVID-19 outbreak a pandemic and the U.S. government imposed travel restrictions on travel between the United States, Europe and certain other countries. Further, the President of the United States declared the COVID-19 pandemic a national emergency, invoking powers under the Stafford Act, the legislation that directs federal emergency disaster response. We have a registered office in Calgary, Alberta, Canada, and engage contract laboratories in various locations in North America. Effective December 13, 2020, the Province of Alberta ordered that all employees work from home unless the employer requires the employee's physical presence to operate effectively, in order to mitigate the impact of the COVID-19 pandemic. Subsequent orders permitted a phased and progressive opening of businesses and permitted some limited gatherings at private residences and public venues. However, in recent weeks, COVID-19 infection caseloads in Alberta have again increased significantly due mainly to the presence of variants of concern in the population. As a result, Alberta returned to its Step 1 restrictions on April 6, 2021 which includes mandatory working from home unless the employer requires the employee's physical presence to operate effectively, and the mandatory wearing of masks in all workplaces. It is uncertain as to when Alberta will be in a position to ease restrictions and progress to Steps 2 to 4 in its COVID-19 pandemic recovery plan which are based on hospitalization levels and declining caseloads.

In response to public health directives and orders and to help minimize the risk of the virus to our employees, we have taken precautionary measures, including implementing work-from-home policies for certain employees. The effects of our work-from-home policies may negatively impact productivity, disrupt our business and delay our clinical programs and timelines and any future clinical trials, the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course. These and similar, and perhaps more severe, disruptions in our operations could negatively impact our business, financial condition and results of operations, including our ability to obtain financing.

Quarantines, shelter-in-place and similar government orders, or the perception that such orders, shutdowns or other restrictions on the conduct of business operations could occur, related to COVID-19 or other infectious diseases could impact personnel at third-party manufacturing facilities in Canada, the United States and other countries, or the availability or cost of materials, which would disrupt our supply chain.

In addition, any clinical trials for our products may be further affected by the COVID-19 pandemic, including:

- delays or difficulties in enrolling patients in the clinical trial, including patients may not be able to comply with clinical trial protocols if quarantines impede patient movement or interrupt healthcare services;
- delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and clinical site staff;
- diversion or prioritization of healthcare resources away from the conduct of clinical trials and towards the COVID-19 pandemic, including the diversion of hospitals serving as our clinical trial sites and hospital staff supporting the conduct of our clinical trials, who, as healthcare providers, may have heightened exposure to the coronavirus that leads to COVID-19 infections and adversely impact our clinical trial operations;
- interruption of key clinical trial activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal, state or provincial governments, employers and others; and
- limitations in employee resources that would otherwise be focused on the conduct of our clinical trials, including because of sickness of employees or their families or the desire of employees to avoid contact with large groups of people.

Risks Related to Our Dependence on Third Parties

Our existing strategic partnerships are important to our business, and future strategic partnerships will likely also be important to us. If we are unable to maintain our strategic partnerships, or if these strategic partnerships are not successful, our business could be adversely affected.

We have limited capabilities for product candidate development and do not yet have any capability for sales, marketing or distribution.

Accordingly, we have entered into strategic partnerships with other companies that we believe can provide such capabilities, including collaboration and license agreements with the Icahn School of Medicine at Mt. Sinai, NY, Lonza Ltd., University of Florida, University of Washington, Dr. Richard Johnson, and the University of Colorado at Denver. Our existing strategic partnerships, and any future strategic partnerships we enter into, may pose a number of risks, including the following:

- strategic partners have significant discretion in determining the efforts and resources that they will apply to these partnerships;
- strategic partners may not perform their obligations as expected;
- strategic partners may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the partners' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- strategic partners may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- strategic partners could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the strategic partners believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than our product candidates;
- product candidates discovered in collaboration with us may be viewed by our strategic partners as competitive with their own product candidates or products, which may cause strategic partners to cease to devote resources to the commercialization of our product candidates;
- a strategic partner with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such product candidates;
- disagreements with strategic partners, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- strategic partners may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation;
- strategic partners may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and
- strategic partnerships may be terminated for the convenience of the partner and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates.

We may not realize the anticipated benefits of our strategic partnerships.

If our strategic partnerships do not result in the successful development and commercialization of product candidates or if one of our partners terminates its agreement with us, we may not receive any future research funding or milestone or royalty payments under the collaboration. Moreover, our estimates of the potential revenue we are eligible to receive under our strategic partnerships may include potential payments in respect of therapeutic programs for which our partners have discontinued development or may discontinue development in the future. Furthermore, our strategic partners may not keep us informed as to the status of their in-house research activities and they may fail to exercise options embedded within certain agreements. Any discontinuation of product development by our strategic partners could reduce the amounts receivable under our strategic partnerships below the stated amounts we are eligible to receive under those agreements. If we do not receive the funding we expect under these agreements, our development of our therapeutic platforms and product candidates could be delayed and we may need additional resources to develop product candidates and our therapeutic platforms. All of the risks relating to product development, regulatory approval and commercialization described in this prospectus also apply to the activities of our program strategic partners.

Additionally, subject to its contractual obligations to us, if one of our strategic partners is involved in a business combination, the partner might deemphasize or terminate the development or commercialization of any product candidate licensed to it by us. If one of our strategic partners terminates its agreement with us, we may find it more difficult to attract new partners.

We face significant competition in seeking new strategic partners.

For some of our product candidates, we may in the future determine to collaborate with additional pharmaceutical and biotechnology companies for development and potential commercialization of therapeutic products. Our ability to reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the strategic partner's resources and expertise, the terms and conditions of the proposed collaboration and the proposed strategic partner's evaluation of a number of factors. These factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The strategic partner may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate.

Strategic partnerships are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future strategic partners. If we are unable to reach agreements with suitable strategic partners on a timely basis, on acceptable terms, or at all, we may have to curtail the development of a product candidate, reduce or delay one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to fund and undertake development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into strategic partnerships and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates or bring them to market or continue to develop our therapeutic platforms and our business may be materially and adversely affected.

We rely on third parties to monitor, support, conduct and oversee clinical trials of the product candidates that we are developing and, in some cases, to maintain regulatory files for those product candidates. We may not be able to obtain regulatory approval for our product candidates or commercialize any products that may result from our development efforts, if we are not able to maintain or secure agreements with such third parties on acceptable terms, if these third parties do not perform their services as required, or if these third parties fail to timely transfer any regulatory information held by them to us.

We rely on entities outside of our control, which may include academic institutions, CROs, hospitals, clinics and other third-party strategic partners, to monitor, support, conduct and oversee preclinical studies and clinical trials of

our current and future product candidates. We also rely on third parties to perform clinical trials on our current and future product candidates when they reach that stage. As a result, we have less control over the timing and cost of these studies and the ability to recruit trial subjects than if we conducted these trials with our own personnel.

If we are unable to maintain or enter into agreements with these third parties on acceptable terms, or if any such engagement is terminated prematurely, we may be unable to enroll patients on a timely basis or otherwise conduct our trials in the manner we anticipate. In addition, there is no guarantee that these third parties will devote adequate time and resources to our studies or perform as required by our contract or in accordance with regulatory requirements, including maintenance of clinical trial information regarding our product candidates. If these third parties fail to meet expected deadlines, fail to transfer to us any regulatory information in a timely manner, fail to adhere to protocols or fail to act in accordance with regulatory requirements or our agreements with them, or if they otherwise perform in a substandard manner or in a way that compromises the quality or accuracy of their activities or the data they obtain, then clinical trials of our product candidates may be extended or delayed with additional costs incurred, or our data may be rejected by the FDA or other regulatory agencies.

Ultimately, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities.

We and our CROs are required to comply with cGCP regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for products in clinical development. Regulatory authorities enforce these cGCP regulations through periodic inspections of clinical trial sponsors, principal investigators and clinical trial sites. If we or any of our CROs fail to comply with applicable cGCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and our submission of marketing applications may be delayed or the FDA may require us to perform additional clinical trials before approving our marketing applications. Upon inspection, the FDA could determine that any of our clinical trials fail or have failed to comply with applicable cGCP regulations. In addition, our clinical trials must be conducted with product produced under the cGMP regulations enforced by the FDA, and our clinical trials may require a large number of test subjects. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process and increase our costs. Moreover, our business may be implicated if any of our CROs violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Part of our reliance and partnerships with CROs includes reliance on third-party doctors, nurses or healthcare workers in our clinical trials. Fraud caused by third party errors or omissions, including intentional or unintentional failure to administer drugs as whole, failure to administer in a timely fashion, failure to accurately record data or complete the assigned measures or tests in order to complete the data that is part of the clinical trial presents risk. Any of these failures can have negative impact on trial outcomes, processes, timeliness and cost. While it falls under a CRO's delegated responsibilities, ultimately we have oversight as the sponsor and must act accordingly.

If any of our clinical trial sites terminate for any reason, we may experience the loss of follow-up information on patients enrolled in our ongoing clinical trials unless we are able to transfer the care of those patients to another qualified clinical trial site. Further, if our relationship with any of our CROs is terminated, we may be unable to enter into arrangements with alternative CROs on commercially reasonable terms, or at all.

Switching or adding CROs or other suppliers can involve substantial cost and require extensive management time and focus. In addition, there is a natural transition period when a new CRO or supplier commences work. As a result, delays may occur, which can materially impact our ability to meet our desired clinical development timelines. If we are required to seek alternative supply arrangements, the resulting delays and potential inability to find a suitable replacement could materially and adversely impact our business.

We rely on third parties to supply and manufacture our product candidates, and we expect to continue to rely on third parties to manufacture and supply our products, if approved for commercial marketing. The development of product candidates and the commercialization of any product candidates, if approved, could be stopped, delayed or made less profitable if any of these third parties fail to provide us with sufficient quantities of product

candidates or approved products, fail to do so at acceptable quality levels or prices, or fail to maintain or achieve satisfactory regulatory compliance.

We do not currently have, nor do we plan to acquire, the infrastructure or capability internally to develop and manufacture our product candidates for use in the conduct of our trials or for commercial supply, if our products are approved for commercial marketing. Instead, we rely on, and expect to continue to rely on third-party providers to manufacture the supplies for our preclinical studies and clinical trials. We currently rely on a limited number of third-party contract manufacturers for all of the required raw materials for our preclinical research and clinical trials, as well as for the manufacture of our product candidates. To the extent any of our manufacturing partners is unable to fulfill these obligations in a timely manner, including as a result of circumstances relating to the COVID-19 pandemic, our clinical trials may be delayed and our business may be adversely affected. In general, reliance on third-party providers may expose us to more risk than if we were to manufacture our product candidates ourselves. We do not control the operational processes of the contract manufacturing organizations with whom we contract, and we are dependent on these third parties for the production of our product candidates in accordance with relevant regulations (such as cGMP), which include, among other things, quality control and the maintenance of records and documentation.

Risks Related to Our Intellectual Property

Our commercial success depends significantly on our ability to operate without infringing the patents and other proprietary rights of third parties.

Our success will depend in part on our ability to operate without infringing the proprietary rights of third parties. Other entities may have or obtain patents or proprietary rights that could limit our ability to make, use, sell, offer for sale or import our future approved products or impair our competitive position.

We are also aware of third party patents and patent applications containing claims. If our products or our strategic partners' products were to be found to infringe any such patents, and we were unable to invalidate those patents, or if licenses for them are not available on commercially reasonable terms, or at all, our business could be materially harmed. These patents may not expire before we receive marketing authorization for our product candidates, and could delay the commercial launch or one or more future products. There is also no assurance that there are not third-party patents or patent applications of which we are aware, but which we do not believe are relevant to our business, which may, nonetheless, ultimately be found to limit our ability to make, use, sell, offer for sale or import our future approved products or impair our competitive position.

Patents that we may ultimately be found to infringe could be issued to third parties. Third parties may have or obtain valid and enforceable patents or proprietary rights that could block us from developing product candidates using our technology. Our failure to obtain a license to any technology that we require may materially harm our business, financial condition and results of operations. Moreover, our failure to maintain a license to any technology that we require may also materially harm our business, financial condition and results of operations. Furthermore, we would be exposed to a threat of litigation.

In the pharmaceutical industry, significant litigation and other proceedings regarding patents, patent applications, trademarks and other intellectual property rights have become commonplace. The types of situations in which we may become a party to such litigation or proceedings include:

- we or our strategic partners may initiate litigation or other proceedings against third parties seeking to invalidate the patents held by those third parties, to obtain a judgment that our products or processes do not infringe those third parties' patents or to obtain a judgement that those parties' patents are unenforceable;
- if our competitors file patent applications that claim technology also claimed by us or our licensors, we or our licensors may be required to participate in interference, derivation or opposition proceedings to determine the priority of invention, which could jeopardize our patent rights and potentially provide a third-party with a dominant patent position;
- if third parties initiate litigation claiming that our processes or products infringe their patent or other intellectual property rights or initiating other proceedings, including post-grant proceedings and inter partes reviews, we and our strategic partners will need to defend against such proceedings; and

- if a license to necessary technology is terminated, the licensor may initiate litigation claiming that our processes or products infringe or misappropriate their patent or other intellectual property rights and/or that we breached our obligations under the license agreement, and we and our strategic partners would need to defend against such proceedings.

These lawsuits would be costly and could affect our results of operations and divert the attention of our management and scientific personnel. Some of our competitors may be able to sustain the cost of such litigation and proceedings more effectively than we can because of their substantially greater resources. There is a risk that a court would decide that we or our strategic partners are infringing the third party's patents and would order us or our strategic partners to stop the activities covered by the patents. In that event, we or our strategic partners may not have a viable alternative to the technology protected by the patent and may need to halt work on the affected product candidate or cease commercialization of an approved product. In addition, there is a risk that a court will order us or our strategic partners to pay third party damages or some other monetary award, depending upon the jurisdiction. An adverse outcome in any litigation or other proceeding could subject us to significant liabilities to third parties, potentially including treble damages and attorneys' fees if we are found to have willfully infringed, and we may be required to cease using the technology that is at issue or to license the technology from third parties. We may not be able to obtain any required licenses on commercially acceptable terms or at all. Any of these outcomes could have a material adverse effect on our business.

If we are unable to obtain, maintain and enforce patent and trade secret protection for our product candidates and related technology, our business could be materially harmed.

Our strategy depends on our ability to identify and seek patent protection for our discoveries. This process is expensive and time consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner or in all jurisdictions where protection may be commercially advantageous. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we have licensed from third parties. Therefore, our owned or in-licensed patents and patent applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. Our patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless, and until, patents issues from such applications, and then only to the extent the issued claims cover the technology. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our current and future product candidates in the United States or in other foreign countries.

Moreover, the patent position of pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. The issuance of a patent does not ensure that it is valid or enforceable. Third parties may challenge the validity, enforceability or scope of our issued patents, and such patents may be narrowed, invalidated, circumvented, or deemed unenforceable. In addition, changes in law may introduce uncertainty in the enforceability or scope of patents owned by pharmaceutical companies. If, our patents are narrowed, invalidated or held unenforceable, third parties may be able to commercialize our technology or products and compete directly with us without payment to us. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found, and such prior art could potentially invalidate one or more of our patents or prevent a patent from issuing from one or more of our pending patent applications. There is also no assurance that there is not prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim in our patents and patent applications, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. Furthermore, even if our patents are unchallenged, they may not adequately protect our intellectual property, provide exclusivity for our product candidates, prevent others from designing around our claims or provide us with a competitive advantage. The legal systems of certain countries do not favor the aggressive enforcement of patents, and the laws of foreign countries may not allow us to protect our inventions with patents to the same extent as the laws of the United States. Because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, or in some cases not at all, and because publications of discoveries in scientific literature lag behind actual discoveries, we cannot be certain that we were the first to make the inventions claimed in our issued patents or pending patent applications, or that we were the first to file for protection of the inventions set forth in our patents or patent applications. As a result, we may not be able to obtain or maintain protection for certain inventions. Therefore, the issuance, validity, enforceability, scope and commercial value of our patents in the United States and in foreign countries cannot be predicted with certainty

and, as a result, any patents that we own or license may not provide sufficient protection against competitors. We may not be able to obtain or maintain patent protection from our pending patent applications, from those we may file in the future, or from those we may license from third parties. Moreover, even if we are able to obtain patent protection, such patent protection may be of insufficient scope to achieve our business objectives. In addition, the issuance of a patent does not give us the right to practice the patented invention. Third parties may have blocking patents that could prevent us from marketing our own patented product and practicing our own patented technology.

Our patents covering one or more of our products or product candidates could be found invalid or unenforceable if challenged.

Any of our intellectual property rights could be challenged or invalidated despite measures we take to obtain patent and other intellectual property protection with respect to our product candidates and proprietary technology. For example, if we were to initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that our patent is invalid and/or unenforceable. In patent litigation in the United States and in some other jurisdictions, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld material information from the United States Patent and Trademark Office ("USPTO"), or the applicable foreign counterpart, or made a misleading statement, during prosecution. A litigant or the USPTO itself could challenge our patents on this basis even if we believe that we have conducted our patent prosecution in accordance with the duty of candor and in good faith. The outcome following such a challenge is unpredictable.

With respect to challenges to the validity of our patents, for example, there might be invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on a product candidate. Even if a defendant does not prevail on a legal assertion of invalidity and/or unenforceability, our patent claims may be construed in a manner that would limit our ability to enforce such claims against the defendant and others. The cost of defending such a challenge, particularly in a foreign jurisdiction, and any resulting loss of patent protection could have a material adverse impact on one or more of our product candidates and our business.

Enforcing our intellectual property rights against third parties may also cause such third parties to file other counterclaims against us, which could be costly to defend, particularly in a foreign jurisdiction, and could require us to pay substantial damages, cease the sale of certain products or enter into a license agreement and pay royalties (which may not be possible on commercially reasonable terms or at all). Any efforts to enforce our intellectual property rights are also likely to be costly and may divert the efforts of our scientific and management personnel.

Our intellectual property rights will not necessarily provide us with competitive advantages.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business, or permit us to maintain our competitive advantage. The following examples are illustrative:

- others may be able to make compounds that are similar to our product candidates but that are not covered by the claims of the patents that we or our strategic partners own or have exclusively licensed;
- others may independently develop similar or alternative technologies without infringing our intellectual property rights;
- issued patents that we own or have exclusively licensed may not provide us with any competitive advantages, or may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- we may obtain patents for certain compounds many years before we obtain marketing approval for products containing such compounds, and because patents have a limited life, which may begin to run prior to the commercial sale of the related product, the commercial value of our patents may be limited;

- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;

- we may fail to develop additional proprietary technologies that are patentable;

- the laws of certain foreign countries may not protect our intellectual property rights to the same extent as the laws of the United States, or vice versa, or we may fail to apply for or obtain adequate intellectual property protection in all the jurisdictions in which we operate; and

- the patents of others may have an adverse effect on our business, for example by preventing us from marketing one or more of our product candidates for one or more indications.

Any of the aforementioned threats to our competitive advantage could have a material adverse effect on our business.

We may become involved in lawsuits to protect or enforce our patents and trade secrets, which could be expensive, time consuming and unsuccessful.

Third parties may seek to market small molecule versions of any approved products. Alternatively, third parties may seek approval to market their own products similar to or otherwise competitive with our product candidates. In these circumstances, we may need to defend or assert our patents, including by filing lawsuits alleging patent infringement. The outcome following legal assertions of invalidity and unenforceability is unpredictable. In any of these types of proceedings, a court or agency with jurisdiction may find our patents invalid or unenforceable. Even if we have valid and enforceable patents, these patents still may not provide protection against competing products or processes sufficient to achieve our business objectives.

Even after they have issued, our patents and any patents that we license may be challenged, narrowed, invalidated or circumvented. If our patents are invalidated or otherwise limited or will expire prior to the commercialization of our product candidates, other companies may be better able to develop products that compete with ours, which could adversely affect our competitive business position, business prospects and financial condition. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates.

The following are examples of litigation and other adversarial proceedings or disputes that we could become a party to involving our patents or patents licensed to us:

- we or our strategic partners may initiate litigation or other proceedings against third parties to enforce our patent and trade secret rights;

- third parties may initiate litigation or other proceedings seeking to invalidate patents owned by or licensed to us or to obtain a declaratory judgment that their product or technology does not infringe our patents or patents licensed to us;

- third parties may initiate opposition or reexamination proceedings challenging the validity or scope of our patent rights, requiring us or our strategic partners and/or licensors to participate in such proceedings to defend the validity and scope of our patents;

- there may be a challenge or dispute regarding inventorship or ownership of patents or trade secrets currently identified as being owned by or licensed to us;

- the USPTO may initiate an interference between patents or patent applications owned by or licensed to us and those of our competitors, requiring us or our strategic partners and/or licensors to participate in an interference proceeding to determine the priority of invention, which could jeopardize our patent rights; or

- third parties may seek approval to market small molecule drug versions of our future approved products prior to expiration of relevant patents owned by or licensed to us, requiring us to defend our patents, including by filing lawsuits alleging patent infringement.

These lawsuits and proceedings would be costly and could affect our results of operations and divert the attention of our managerial and scientific personnel. Adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we or our licensors can. There is a risk that a court or administrative body would decide that our patents are invalid or not infringed or trade secrets not misappropriated by a third party's activities, or that the scope of certain issued claims must be further limited. An adverse outcome in a litigation or proceeding involving our own patents or trade secrets could limit our ability to assert our patents or trade secrets against these or other competitors, affect our ability to receive royalties or other licensing consideration from our licensees, and may curtail or preclude our ability to exclude third parties from making, using and selling similar or competitive products. Any of these occurrences could adversely affect our competitive business position, business prospects and financial condition.

We may not be able to prevent, alone or with our licensors, infringement or misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States. Any litigation or other proceedings to enforce our intellectual property rights may fail, and even if successful, may result in substantial costs and distract our management and other employees.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have an adverse effect on the price of our common shares.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to develop a platform that is similar to, or better than, ours in a way that is not covered by the claims of our patents;
- others may be able to make compounds that are similar to our product candidates but that are not covered by the claims of our patents;
- we might not have been the first to make the inventions covered by patents or pending patent applications;
- we might not have been the first to file patent applications for these inventions;
- any patents that we obtain may not provide us with any competitive advantages or may ultimately be found invalid or unenforceable; or
- we may not develop additional proprietary technologies that are patentable or that afford meaningful trade secret protection.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired, we may be open to competition from competitive products, including biosimilars. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

If we do not obtain protection under the Hatch-Waxman amendments and similar foreign legislation for extending the term of patents covering each of our product candidates, our business may be materially harmed.

Depending upon the timing, duration and conditions of FDA marketing approval of our product candidates, one or more of our U.S. patents may be eligible for limited patent term extension under the Hatch-Waxman Amendments.

The Hatch-Waxman Amendments permit a patent term extension of up to five years for a patent covering an approved product as compensation for effective patent term lost during product development and the FDA regulatory review process. However, we may not receive an extension if we fail to apply within applicable deadlines, fail to apply prior to expiration of relevant patents or otherwise fail to satisfy applicable requirements. Moreover, the length of the extension could be less than we request. If we are unable to obtain patent term extension or the term of any such extension is less than we request, the period during which we can enforce our patent rights for that product will be shortened compared to expectations and our competitors may obtain approval to market competing products sooner. As a result, our revenue from applicable products could be reduced, possibly materially. Further, if this occurs, our competitors may take advantage of our investment in development and trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case.

If we are unable to protect the confidentiality of our proprietary information, the value of our technology and products could be adversely affected.

In addition to patent protection, we also rely on other proprietary rights, including protection of trade secrets, and other proprietary information. For example, we treat our proprietary computational technologies, including unpatented know-how and other proprietary information, as trade secrets. To maintain the confidentiality of trade secrets and proprietary information, we enter into confidentiality agreements with our employees, consultants, strategic partners and others upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees and our personnel policies also provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. Thus, despite such agreement, such inventions may become assigned to third parties. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. To the extent that our employees, consultants or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions. To the extent that an individual who is not obligated to assign rights in intellectual property to us is rightfully an inventor of intellectual property, we may need to obtain an assignment or a license to that intellectual property from that individual, or a third party or from that individual's assignee. Such assignment or license may not be available on commercially reasonable terms or at all.

Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming and the outcome is unpredictable. The disclosure of our trade secrets would impair our competitive position and may materially harm our business, financial condition and results of operations. Costly and time consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to maintain trade secret protection could adversely affect our competitive business position. In addition, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent such third party, or those to whom they communicate such technology or information, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, or if we otherwise lose protection for our trade secrets or proprietary know-how, the value of this information may be greatly reduced and our business and competitive position could be harmed. Adequate remedies may not exist in the event of unauthorized use or disclosure of our proprietary information.

As is common in the biotechnology and pharmaceutical industries, we employ individuals who were previously or concurrently employed at research institutions and/or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may be subject to claims that these employees, or we, have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers, or that patents and applications we have filed to protect inventions of these employees, even those related to one or more of our product candidates, are rightfully owned by their former or concurrent employer.

Litigation may be necessary to defend against these claims. Such trade secrets or other proprietary information could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products. Such license may not be available on commercially reasonable terms or at all. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

Obtaining and maintaining our patent protection depends on compliance with various procedural, documentary, fee payment and other requirements imposed by regulations and governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents or applications will be due to the USPTO and various foreign patent offices at various points over the lifetime of our patents or applications. We have systems in place to remind us to pay these fees, and we rely on our outside patent annuity service to pay these fees when due. Additionally, the USPTO and various foreign patent offices require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and in many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with rules applicable to the particular jurisdiction. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. If such an event were to occur, it could have a material adverse effect on our business.

We may be subject to claims challenging the inventorship of our patents and other intellectual property.

Although we are not currently experiencing any claims challenging the inventorship or ownership of our patents, we may in the future be subject to claims that former employees, strategic partners or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. While it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. For example, the assignment of intellectual property rights may not be self-executing or the assignment agreements may be breached, or we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Patent protection and patent prosecution for some of our product candidates may be dependent on, and the ability to assert patents and defend them against claims of invalidity may be maintained by, third parties.

There may be times in the future when certain patents that relate to our product candidates or any approved products are controlled by our licensees or licensors. Although we may, under such arrangements, have rights to consult with our strategic partners on actions taken as well as back-up rights of prosecution and enforcement, we have in the past and may in the future relinquish rights to prosecute and maintain patents and patent applications within our portfolio as well as the ability to assert such patents against infringers.

If any current or future licensee or licensor with rights to prosecute, assert or defend patents related to our product candidates fails to appropriately prosecute and maintain patent protection for patents covering any of our product candidates, or if patents covering any of our product candidates are asserted against infringers or defended against claims of invalidity or unenforceability in a manner which adversely affects such coverage, our ability to develop and commercialize any such product candidate may be adversely affected and we may not be able to prevent competitors from making, using and selling competing products.

Changes in patent laws or patent jurisprudence could diminish the value of patents in general, thereby impairing our ability to protect our products.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. Changes in either the patent laws or in the interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or found to be enforceable in our patents, in our strategic partners' patents or in third-party patents. The United States has enacted and is currently implementing wide-ranging patent reform legislation. Further, recent U.S. Supreme Court rulings have either narrowed the scope of patent protection available in certain circumstances or weakened the rights of patent owners in

certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the validity, scope and value of patents, once obtained.

For our U.S. patent applications containing a priority claim after March 16, 2013, there is a greater level of uncertainty in the patent law. In September 2011, the Leahy-Smith America Invents Act, also known as the America Invents Act, or AIA, was signed into law. The AIA includes a number of significant changes to U.S. patent law, including provisions that affect the way patent applications will be prosecuted and may also affect patent litigation.

The AIA and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have an adverse effect on our business. An important change introduced by the AIA is that, as of March 16, 2013, the United States transitioned to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties disclosing or claiming the same invention. A third party that has filed, or does file a patent application in the USPTO after March 16, 2013 but before us, could be awarded a patent covering a given invention, even if we had made the invention before it was made by the third party. This requires us to be cognizant going forward of the time from invention to filing of a patent application.

Among some of the other changes introduced by the AIA are changes that limit where a patentee may file a patent infringement suit and providing opportunities for third parties to challenge any issued patent in the USPTO. This applies to all of our U.S. patents, even those issued before March 16, 2013. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal court necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action.

Depending on decisions by the U.S. Congress, the U.S. federal courts, the USPTO or similar authorities in foreign jurisdictions, the laws and regulations governing patents could change in unpredictable ways that may weaken our and our licensors' ability to obtain new patents or to enforce existing patents we and our licensors or partners may obtain in the future.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other jurisdictions.

Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our current or future products, if any, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. Recent United States Supreme Court cases have narrowed the scope of what is considered patentable subject matter, for example, in the areas of software and diagnostic methods involving the association between disease state treatment outcome and biomarkers. This could impact our ability to patent certain aspects of our technology in the United States.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate

and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Additionally, the requirements for patentability may differ in certain countries, particularly developing countries. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license.

We will need to obtain FDA approval for any proposed product candidate names, and any failure or delay associated with such approval may adversely affect our business.

Any proprietary name or trademark we intend to use for our product candidates will require approval from the FDA regardless of whether we have secured a formal trademark registration from the USPTO. The FDA typically conducts a review of proposed product candidate names, including an evaluation of the potential for confusion with other product names. If the FDA objects to any product candidate names we propose, we may be required to adopt an alternative name for the product candidate. If we adopt an alternative name, we would lose the benefit of any existing trademark applications for such product candidate and may be required to expend significant additional resources in an effort to identify a suitable product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. We may be unable to build a successful brand identity for a new trademark in a timely manner or at all, which would limit our ability to commercialize our product candidates.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our marks of interest and our business may be adversely affected.

Our trademarks or trade names may be challenged, infringed, circumvented or declared generic, descriptive, non-distinctive, or otherwise invalid or determined to be infringing on other marks. We rely on common law (unregistered) protection for our trademarks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. During the trademark registration process, we may receive office actions from the USPTO or comparable agencies in foreign jurisdictions objecting to the registration of our trademarks. Although we would be given an opportunity to respond to those objections, we may be unable to overcome such rejections. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and/or to seek the cancellation of registered trademarks.

Opposition or cancellation proceedings or lawsuits may be filed against our trademarks, and our trademarks may not survive such proceedings. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected.

Our proprietary position depends upon patents that are manufacturing, formulation or method-of-use patents, which may not prevent a competitor or other third party from using the same product candidate for another use.

Composition-of-matter patents on the active pharmaceutical ingredient, or API, in prescription drug products are generally considered to be the strongest form of intellectual property protection for drug products because such patents provide protection without regard to any particular method of use or manufacture or formulation of the API used. We currently have granted U.S. patents with claims to the use of uric acid lowering agents to treat insulin resistance or diabetic nephropathy, and patent applications filed in the U.S., EU and under the Patent Cooperation Treaty with similar claims for the treatment of metabolic syndrome, diabetes, fatty liver disease as well as a composition of matter patent for formulations of xanthine oxidase inhibitors.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals and engage consultants who were previously or are currently employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants or independent contractors have

inadvertently or otherwise used or disclosed confidential information of these third parties or our employees' former employers or our consultants' or contractors' current or former clients or customers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees. If we are not successful, we could lose access or exclusive access to valuable intellectual property.

We may be subject to damages resulting from claims that we, our employees or our consultants have wrongfully used or disclosed alleged trade secrets of our competitors or are in breach of non-competition or non-solicitation agreements with our competitors.

Many of our consultants were previously or are currently employed at other, third party, biotechnology and pharmaceutical companies, and this many include our competitors or potential competitors. We may be subject to claims that we, our employees or our consultants have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of these third parties. In addition, we may in the future be subject to claims that we caused an employee of a third party to breach the terms of his or her non-competition or non-solicitation agreement. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and could be a distraction to management. If our defense to those claims fails, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Any litigation or the threat thereof may adversely affect our ability to hire employees. A loss of key personnel or their work product could hamper or prevent our ability to commercialize product candidates, which could have an adverse effect on our business, financial condition and results of operations.

We depend on intellectual property licensed from third parties and termination of any of these licenses could result in the loss of significant rights, which would harm our business.

We are dependent on patents, know-how and proprietary technology, both our own and licensed from others. We license technology from the University of Florida, the University of Washington and Dr. Richard Johnson.

These agreements impose numerous obligations, such as diligence and payment obligations. Any termination of these licenses could result in the loss of significant rights and could harm our ability to commercialize our product candidates. These licenses do and future licenses may include provisions that impose obligations and restrictions on us. This could delay or otherwise negatively impact a transaction that we may wish to enter into.

Disputes may also arise between us and our licensors regarding intellectual property subject to a license agreement, including disputes concerning:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our product candidates, and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates.

We are generally also subject to all of the same risks with respect to protection of intellectual property that we license, as we are for intellectual property that we own, which are described below. If we or our licensors fail to adequately protect this intellectual property, our ability to commercialize products could suffer.

If we fail to comply with our obligations under our patent licenses with third parties, we could lose license rights that are important to our business.

We are a party to license agreements with University of Florida, University of Washington and others, pursuant to which we in-license key patent and patent applications for use in one or more of our product candidates. These existing licenses impose various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, the licensors may have the right to terminate the licenses, in which event we would not be able to develop or market the products covered by such licensed intellectual property.

We rely on certain of our licensors to file and prosecute patent applications and maintain patents and otherwise protect the intellectual property we license from them and may continue to do so in the future. We have limited control over these activities or any other intellectual property that may be related to our in-licensed intellectual property. For example, we cannot be certain that such activities by these licensors have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents and other intellectual property rights. We have limited control over the manner in which our licensors initiate infringement proceeding against a third-party infringer of the intellectual property rights, or defend certain of the intellectual property that is licensed to us. It is possible that any licensors' infringement proceeding or defense activities may be less vigorous than had we conducted them ourselves.

Numerous factors may limit any potential competitive advantage provided by our intellectual property rights.

The degree of future protection afforded by our intellectual property rights, whether owned or in-licensed, is uncertain because intellectual property rights have limitations, and may not adequately protect our business, provide a barrier to entry against our competitors or potential competitors, or permit us to maintain our competitive advantage. Moreover, if a third party has intellectual property rights that cover the practice of our technology, we may not be able to fully exercise or extract value from our intellectual property rights. The following examples are illustrative:

- pending patent applications that we own or license may not lead to issued patents;
- patents, should they issue, that we own or license, may not provide us with any competitive advantages, or may be challenged and held invalid or unenforceable;
- others may be able to develop and/or practice technology that is similar to our technology or aspects of our technology but that is not covered by the claims of any of our owned or in-licensed patents, should any such patents issue;
- third parties may compete with us in jurisdictions where we do not pursue and obtain patent protection;
- we (or our licensors) might not have been the first to make the inventions covered by a pending patent application that we own or license;
- we (or our licensors) might not have been the first to file patent applications covering a particular invention;
- others may independently develop similar or alternative technologies without infringing our intellectual property rights;
- we may not be able to obtain and/or maintain necessary licenses on reasonable terms or at all;
- third parties may assert an ownership interest in our intellectual property and, if successful, such disputes may preclude us from exercising exclusive rights, or any rights at all, over that intellectual property;
- we may not be able to maintain the confidentiality of our trade secrets or other proprietary information;
- we may not develop or in-license additional proprietary technologies that are patentable; and
- the patents of others may have an adverse effect on our business.

Should any of these events occur, they could materially harm our business and the results of our operation.

Risks Related to Additional Legal and Compliance Matters

Our employees and independent contractors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees or independent contractors. Misconduct by these parties could include intentional failures to comply with FDA regulations, to provide accurate information to the FDA, to comply with manufacturing standards we may establish for our product candidates, to comply with federal and state data privacy, security, fraud and abuse laws and other healthcare regulations, to report financial information or data accurately or to disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Activities subject to these law could also involve the improper use or misrepresentation of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a Code of Conduct and Business Ethics, or Code of Conduct, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. Additionally, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a material and adverse effect on our business, financial condition, results of operations and prospects, including the imposition of significant civil, criminal and administrative penalties, monetary damages, fines, disgorgement, imprisonment, loss of eligibility to obtain marketing approvals from the FDA, exclusion from participation in government contracting, healthcare reimbursement or other government programs, including Medicare and Medicaid, reputational harm, diminished profits and future earnings, additional reporting requirements if subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with any of these laws, and the curtailment or restructuring of our operations.

If we market products in a manner that violates healthcare fraud and abuse laws, we may be subject to civil or criminal penalties.

In addition to FDA restrictions on the marketing of pharmaceutical products, federal and state healthcare laws restrict certain business practices in the pharmaceutical industry. Although we currently do not have any products on the market, we may be subject, and once our product candidates are approved and we begin commercialization will be subject, to additional healthcare laws and regulations enforced by the federal government and by authorities in the states and foreign jurisdictions in which we conduct our business. These state and federal healthcare laws, commonly referred to as “fraud and abuse” laws, have been applied in recent years to restrict certain marketing practices in the pharmaceutical industry, and include, but are not limited to, anti- kickback, false claims, data privacy and security and transparency statutes and regulations.

For example, federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, or causing to be made, a false statement to get a false claim paid. The federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce, or in return for, purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other.

Although there are several statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exemption or safe harbor. Most states also have statutes or regulations similar to the federal anti-kickback law and federal false claims laws, which may apply to items such as pharmaceutical products and services reimbursed by private insurers. Administrative, civil and criminal sanctions may be imposed under these federal and state laws.

Over the past few years, a number of pharmaceutical and other healthcare companies have been prosecuted under these laws for a variety of promotional and marketing activities, such as:

- providing free trips, free goods, sham consulting fees and grants and other monetary benefits to prescribers;
- reporting to pricing services inflated average wholesale prices that were then used by federal programs to set reimbursement rates;
- engaging in off-label promotion; and
- submitting inflated best price information to the Medicaid Rebate Program to reduce liability for Medicaid rebates.

If our operations are found to be in violation of any of the healthcare laws or regulations that may apply to us, we may be subject to penalties, including potentially significant criminal, civil or administrative penalties, damages, fines, disgorgement, individual imprisonment, exclusion of products from reimbursement under government programs, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings or the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. To the extent that any of our products will be sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post- marketing requirements, including safety surveillance, fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research and development involves, and may in the future involve, the use of potentially hazardous materials and chemicals. Our operations may produce hazardous waste products. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by local, state and federal laws and regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations and fire and building codes, including those governing laboratory procedures, exposure to blood-borne pathogens, use and storage of flammable agents and the handling of biohazardous materials. We do not maintain workers' compensation insurance. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us. Additional federal, state and local laws and regulations affecting our operations may be adopted in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate, any of these laws or regulations.

Risks Related to Employee Matters and Managing Growth

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on the research and development, clinical and business expertise of Dr. Allen Warren Davidoff, our President and Chief Executive Officer, Mr. James Neville Fairbairn, our Chief Financial Officer, as well as other members of our senior management, scientific and clinical team. Although we have entered into employment agreements with our executive officers, each of them may terminate their employment with us at any time. We currently do not maintain "key person" insurance coverage for Dr. Davidoff and Mr. Fairbairn. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy.

Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will also be critical to our success. In addition, we will need to expand and effectively manage our managerial, operational, financial, development and other resources in order to successfully pursue our research, development and commercialization efforts for our existing and future product candidates. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited talent pool in our industry due to the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. Intense competition for attracting key skill-sets may limit our ability to retain and motivate

these key personnel on acceptable terms. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

We will need to grow our organization, and we may experience difficulty in managing this growth, which could disrupt our operations.

As of May 7, 2021, we had one full-time employee and 11 consultants. As our development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect to expand our employee base for managerial, operational, financial and other resources. Additionally, as our product candidates enter and advance through preclinical studies and any clinical trials, we will need to expand our development, manufacturing, regulatory sales and marketing capabilities or contract with other organizations to provide these capabilities for us. Future growth would impose significant added responsibilities on members of management, including the need to identify, recruit, maintain, motivate and integrate additional employees. Also, our management may need to divert a disproportionate amount of their attention away from our day-to-day activities and devote a substantial amount of time to managing these growth activities. We may not be able to effectively manage the expansion of our operations, which may result in weaknesses in our infrastructure, give rise to operational errors, loss of business opportunities, loss of employees and reduced productivity amongst remaining employees. Our expected growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of existing and additional product candidates. If our management is unable to effectively manage our expected growth, our expenses may increase more than expected, our ability to generate or grow revenue could be reduced and we may not be able to implement our business strategy. Our future financial performance and our ability to commercialize our product candidates and compete effectively with others in our industry will depend on our ability to effectively manage any future growth.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our CROs, CMOs and other contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. We rely on third-party manufacturers to produce and process our product candidates on a patient-by-patient basis. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption.

Risks Related to Our Securities and this Offering

Our share price is likely to be volatile and the market price of our common shares after this offering may drop below the price you pay.

You should consider an investment in our securities as risky and invest only if you can withstand a significant loss and wide fluctuations in the market value of your investment. You may be unable to sell your securities at or above the initial public offering price due to fluctuations in the market price of our common shares arising from changes in our operating performance or prospects. In addition, the stock market has recently experienced significant volatility, particularly with respect to pharmaceutical, biotechnology and other life sciences company stocks. The volatility of pharmaceutical, biotechnology and other life sciences company stocks often does not relate to the operating performance of the companies represented by the stock. Some of the factors that may cause the market price of our common shares to fluctuate or decrease below the price paid in this offering include:

- results and timing of our clinical trials and clinical trials of our competitors' products;
- failure or discontinuation of any of our development programs;

- issues in manufacturing our product candidates or future approved products;
- regulatory developments or enforcement in the United States and foreign countries with respect to our product candidates or our competitors' products;
- competition from existing products or new products that may emerge;
- developments or disputes concerning patents or other proprietary rights;
- introduction of technological innovations or new commercial products by us or our competitors;
- announcements by us, our strategic partners or our competitors of significant acquisitions, strategic partnerships, joint ventures, or capital commitments;
- changes in estimates or recommendations by securities analysts, if any cover our common shares;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- public concern over our product candidates or any future approved products;
- litigation;
- future sales of our common shares;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- additions or departures of key personnel;
- changes in the structure of healthcare payment systems in the United States or overseas;
- failure of any of our product candidates, if approved, to achieve commercial success;
- economic and other external factors or other disasters or crises;
- period-to-period fluctuations in our financial condition and results of operations, including the timing of receipt of any milestone or other payments under commercialization or licensing agreements;
- general market conditions and market conditions for pharmaceutical stocks;
- overall fluctuations in U.S. equity markets; and
- other factors that may be unanticipated or out of our control.

In addition, in the past, when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our shareholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit and divert the time and attention of our management, which could seriously harm our business.

Substantial future sales of our common shares, or the perception that these sales could occur, may cause the price of our common shares to drop significantly, even if our business is performing well.

A large volume of sales of our common shares could decrease the prevailing market price of our common shares and could impair our ability to raise additional capital through the sale of equity securities in the future. Even if a substantial number of sales of our common shares does not occur, the mere perception of the possibility of these sales could depress the market price of our common shares and have a negative effect on our ability to raise capital in the future.

We will incur significant increased costs as a result of operating as a public company in the United States, and our management will be required to devote substantial time to corporate governance standards.

We are already a public company in Canada. However, as a public company in the United States, we will incur additional significant legal, accounting and other expenses that we did not incur as a public company in Canada. In addition, our administrative staff will be required to perform additional tasks. For example, in anticipation of becoming

a public company in the United States, we will need to adopt additional internal controls, disclosure controls and procedures and policies specific to complying with the requirements of a public company in the United States. We will bear all of the internal and external costs of preparing and distributing periodic public reports in compliance with our obligations under the applicable securities laws.

In addition, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act and the related rules and regulations implemented by the SEC, the applicable Canadian securities regulators, the Nasdaq, and the TSXV, have increased legal and financial compliance costs and will make some compliance activities more time consuming. We are currently evaluating these rules, and cannot predict or estimate the amount of additional costs we may incur or the timing of such costs. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment will result in increased general and administrative expenses and may divert management's time and attention from our other business activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us and our business may be harmed. In connection with this offering, we will increase our directors' and officers' insurance coverage which will increase our insurance cost. In the future, it may be more expensive or more difficult for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

Under the corporate governance standards of the Nasdaq, a majority of our board of directors and each member of our audit committee must be an independent director no later than the first anniversary of the completion of this offering. The policies of the TSXV require that our board of directors has at least three directors who are qualified to be directors under applicable corporate and securities laws. Subject to certain limited exceptions, Canadian securities laws require each member of the audit committee to be independent and financially literate within the meaning of Canadian securities laws. We may encounter difficulty in attracting qualified persons to serve on our board of directors and the audit committee, and our board of directors and management may be required to divert significant time and attention and resources away from our business to identify qualified directors. If we fail to attract and retain the required number of independent directors, we may be subject to the delisting of our common shares from the Nasdaq and TSXV.

We are a "foreign private issuer" and may have disclosure obligations that are different from those of U.S. domestic reporting companies. As a foreign private issuer, we are subject to different U.S. securities laws and rules than a domestic U.S. issuer, which could limit the information publicly available to our shareholders.

As a "foreign private issuer", we are subject to reporting obligations that, in certain respects, are less detailed and less frequent than those of U.S. domestic reporting companies. We are required to file or furnish to the SEC the continuous disclosure documents that we are required to file in Canada under Canadian securities laws. For example, we are not required to issue quarterly reports, proxy statements that comply with the requirements applicable to U.S. domestic reporting companies, or individual executive compensation information that is as detailed as that required of U.S. domestic reporting companies. We will also have four months after the end of each fiscal year to file our annual reports with the SEC and will not be required to file current reports as frequently or promptly as U.S. domestic reporting companies. Furthermore, our officers, directors and principal shareholders are exempt from the insider reporting and short-swing profit recovery requirements in Section 16 of the Exchange Act. Accordingly, our shareholders may not know on as timely a basis when our officers, directors and principal shareholders purchase or sell their common shares, as the reporting deadlines under the corresponding Canadian insider reporting requirements are longer (we have four days to report). As a foreign private issuer, we are also exempt from the requirements of Regulation FD (Fair Disclosure) which, generally, are meant to ensure that select groups of investors are not privy to specific information about an issuer before other investors. As a result of such varied reporting obligations, shareholders should not expect to receive the same information at the same time as information provided by U.S. domestic companies.

In addition, as a foreign private issuer, we have the option to follow certain Canadian corporate governance practices rather than those of the United States, except to the extent that such laws would be contrary to U.S. securities laws, provided that we disclose the requirements we are not following and describe the Canadian practices we follow instead. As a result, our shareholders may not have the same protections afforded to shareholders of companies that are subject to all domestic U.S. corporate governance requirements.

We may lose our "foreign private issuer" status in the future, which could result in additional costs and expenses to us.

We are a "foreign private issuer," as such term is defined in Rule 405 under the Securities Act and are not subject to the same requirements that are imposed upon U.S. domestic issuers by the Securities and Exchange Commission, or SEC. We may in the future lose foreign private issuer status if a majority of our common shares are held in the United States and we fail to meet the additional requirements necessary to avoid loss of foreign private issuer status, such as if: (i) a majority of our directors or executive officers are U.S. citizens or residents; (ii) a majority of our assets are located in the United States; or (iii) our business is administered principally in the United States. The regulatory and compliance costs to us under U.S. securities laws as a U.S. domestic issuer will be significantly more than the costs incurred as a Canadian foreign private issuer. If we are not a foreign private issuer, we would be required to file periodic and current reports and registration statements on U.S. domestic issuer forms with the SEC, which are generally more detailed and extensive than the forms available to a foreign private issuer. In addition, we may lose the ability to rely upon exemptions from corporate governance requirements that are available to foreign private issuers.

We are an "emerging growth company," and any decision on our part to comply only with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our common shares less attractive to investors.

We are an "emerging growth company," as defined in the JOBS Act. For as long as we continue to be an "emerging growth company," we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies that are not "emerging growth companies," including, but not limited to, not being required to have our independent registered public accounting firm audit our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002 ("Section 404"), reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We could be an "emerging growth company" for up to five years following the completion of this offering, although, if we have more than $1.07 billion in annual revenue, if the market value of our common shares held by non-affiliates exceeds $700 million as of June 30 of any year, or we issue more than $1.0 billion of non-convertible debt over a three-year period before the end of that five-year period, we would cease to be an "emerging growth company" as of the following December 31. Investors could find our common shares less attractive if we choose to rely on these exemptions. If some investors find our common shares less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for our common shares and our share price may be more volatile.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, shareholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our common shares.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404 or any subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common shares.

We will be required to disclose changes made in our internal controls and procedures on a quarterly basis and our management will be required to assess the effectiveness of these controls annually. However, for as long as we are an "emerging growth company" under the JOBS Act, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404. We could be an "emerging growth company" for up to five years following this offering. An independent assessment of the effectiveness of our internal controls could detect problems that our management's assessment might not. Undetected material weaknesses in our internal controls could lead to financial statement restatements and require us to incur the expense of remediation.

There is no public market for the pre-funded warrants or the Common Share Purchase Warrants being offered by us in this offering.

There is no established public trading market for the pre-funded warrants or the Common Share Purchase Warrants and we do not expect a market to develop. In addition, we do not intend to apply to list the pre-funded warrants or the Common Share Purchase Warrants on any national securities exchange or other nationally recognized trading system, including the QTCQB, CSE, the Nasdaq and the TSXV. Without an active market, the liquidity of the pre-funded warrants and the Common Share Purchase Warrants will be limited, which may adversely affect their value.

Holders of pre-funded warrants or Common Share Purchase Warrants purchased in this offering will have no rights as common shareholders until such holders exercise their pre-funded warrants or Common Share Purchase Warrants and acquire our common shares.

Until holders of pre-funded warrants or Common Share Purchase Warrants acquire our common shares upon exercise thereof, such holders will have no rights with respect to our common shares underlying the pre-funded warrants and Common Share Purchase Warrants. Upon exercise of the pre-funded warrants or Common Share Purchase Warrants, the holders will be entitled to exercise the rights of a common shareholder only as to matters for which the record date occurs after the exercise date.

Common Share Purchase Warrants and pre-funded warrants are speculative in nature.

The Common Share Purchase Warrants and pre-funded warrants do not confer any rights of common share ownership on its holders, such as voting rights or the right to receive dividends, but rather merely represent the right to acquire common shares at a fixed price for a limited period of time. Specifically, commencing on the date of issuance, holders of the Common Share Purchase Warrants and pre-funded warrants may exercise their right to acquire the common shares and pay an exercise price of US$ per common share, subject to certain adjustments, prior to five years from the date of issuance, after which date any unexercised Common Share Purchase Warrants and pre-funded warrants will expire and have no further value. Moreover, following this offering, the market value of the Common Share Purchase Warrants and pre-funded warrants, if any, is uncertain and there can be no assurance that the market value of the Common Share Purchase Warrants and pre-funded warrants will equal or exceed their imputed offering price. The Common Share Purchase Warrants and pre-funded warrants will not be listed or quoted for trading on any market or exchange. There can be no assurance that the market price of the common shares will ever equal or exceed the exercise price of the Common Share Purchase Warrants and pre-funded warrants, and consequently, it may not ever be profitable for holders of the Common Share Purchase Warrants and pre-funded warrants to exercise the Common Share Purchase Warrants or the pre-funded warrants.

Our management team will have broad discretion to use the net proceeds from this offering and its investment of these proceeds may not yield a favorable return. They may invest the proceeds of this offering in ways with which investors disagree.

Our management team will have broad discretion in the application of the net proceeds from this offering and could spend or invest the proceeds in ways with which our shareholders disagree. Accordingly, investors will need to rely on our management team's judgment with respect to the use of these proceeds. We intend to use the proceeds from this offering in the manner described under "Use of Proceeds." The failure by management to apply these funds effectively could negatively affect our ability to operate and grow our business.

We cannot specify with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering. In addition, the amount, allocation and timing of our actual expenditures will depend upon numerous factors, including milestone payments received from our strategic partnerships and royalties received on sale of our approved product and any future approved product.

Accordingly, we will have broad discretion in using these proceeds. Until the net proceeds are used, they may be placed in investments that do not produce significant income or that may lose value.

Investors in this offering will pay a much higher price than the book value of our common shares and therefore you will incur immediate and substantial dilution of your investment.

The initial public offering price will be substantially higher than the net tangible book value per common share based on the total value of our tangible assets less our total liabilities immediately following this offering. Therefore, if you purchase securities in this offering, you will experience immediate and substantial dilution of approximately $ per security, representing the difference between our pro forma as adjusted net tangible book value per share after giving effect to this offering at an assumed initial public offering price of US$ per common share, which is based on the last reported price of our common shares on the TSXV on May , 2021 of $ per common share. As at March 31, 2021, we have issued 5,200,000 outstanding stock options and 25,170,626 outstanding warrants to acquire common shares. To the extent these outstanding options and warrants are ultimately exercised, you will experience further dilution. See "Dilution."

An active trading market for our common shares may never develop or be sustained.

We have applied to list our common shares on the Nasdaq and TSXV. However, there has been a limited public trading market on the QTCQB in the United States. We cannot assure you that an active trading market for our common shares will develop on the Nasdaq or the TSXV or elsewhere or, if developed, that any market will be sustained. Accordingly, we cannot assure you of the likelihood that an active trading market for our common shares will develop or be maintained, the liquidity of any trading market, your ability to sell your shares of our common shares when desired, or the prices that you may obtain for your common shares.

We might be unable to list our common shares on the Nasdaq or the TSXV may delist our securities from its exchange, which could limit investors' ability to make transactions in our securities and subject us to additional trading restrictions.

We have applied to list our common shares on the Nasdaq and the TSXV. In order to make a final determination of compliance with its listing criteria, the Nasdaq may look to the first trading day's activity and, particularly, the last bid price on such day. In the event the trading price for our common shares drops below Nasdaq's minimum bid requirements, the Nasdaq could rescind our initial listing approval. If we fail to list the common shares on Nasdaq, the liquidity for our common shares would be significantly impaired, which may substantially decrease the trading price of our common shares.

In addition, in the future, our securities may fail to meet the continued listing requirements to be listed on the Nasdaq or the TSXV. If the Nasdaq or TSXV delists our common shares from trading on its exchange, we could face significant material adverse consequences, including:

- a limited availability of market quotations for our securities;
- a determination that our common shares is a "penny stock" which will require brokers trading in our common shares to adhere to more stringent rules and possibly resulting in a reduced level of trading activity in the secondary trading market for our common shares;
- a limited amount of news and analyst coverage for our company; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

We are governed by the corporate laws of Canada which in some cases have a different effect on shareholders than the corporate laws of the United States.

We are governed by the BCBCA and other relevant laws, which may affect the rights of shareholders differently than those of a company governed by the laws of a U.S. jurisdiction, and may, together with our charter documents, have the effect of delaying, deferring or discouraging another party from acquiring control of our company by means of a tender offer, a proxy contest or otherwise, or may affect the price an acquiring party would be willing to offer in such an instance. The material differences between the BCBCA and Delaware General Corporation Law, or DGCL, that may have the greatest such effect include, but are not limited to, the following: (i) for certain corporate transactions (such as mergers and amalgamations or amendments to our articles) the BCBCA generally requires the voting threshold to be a special resolution approved by 662/3% of shareholders, or as set out in the articles, as applicable, whereas DGCL generally only requires a majority vote; and (ii) under the BCBCA a holder of 5% or more of our common shares can requisition a special meeting of shareholders, whereas such right does not exist under the DGCL. We cannot predict whether investors will find our company and our common shares less attractive because we are governed by foreign laws.

In addition, a non-Canadian must file an application for review with the Minister responsible for the Investment Canada Act and obtain approval of the Minister prior to acquiring control of a "Canadian Business" within the meaning of the Investment Canada Act, where prescribed financial thresholds are exceeded. Finally, limitations on the ability to acquire and hold our common shares may be imposed by the Competition Act (Canada). The Competition Act (Canada) establishes a pre-merger notification regime for certain types of merger transactions that exceed certain statutory shareholding and financial thresholds. Transactions that are subject to notification cannot be closed until the required materials are filed and the applicable statutory waiting period has expired or been waived by the Commissioner. However, the Competition Act (Canada) permits the Commissioner of Competition to review any acquisition or establishment, directly or indirectly, including through the acquisition of shares, of control over or of a significant interest in us, whether or not it is subject to mandatory notification. Otherwise, there are no limitations either under the laws of Canada, or in our articles of incorporation, or "articles," or amended and restated bylaws, or "bylaws," on the rights of non-Canadians to hold or vote our common shares. Any of these provisions may discourage a potential acquirer from proposing or completing a transaction that may have otherwise presented a premium to our shareholders. We cannot predict whether investors will find our Company and our common shares less attractive because we are governed by foreign laws.

U.S. civil liabilities may not be enforceable against us, our directors, our officers or certain experts named in this prospectus.

We are governed by the BCBCA and our principal place of business is in Canada. Many of our directors and officers, as well as certain experts named herein, reside outside of the United States, and all or a substantial portion of their assets as well as all or a substantial portion of our assets are located outside the United States. As a result, it may be difficult for investors to effect service of process within the United States upon us and such directors, officers and experts or to enforce judgments obtained against us or such persons, in U.S. courts, in any action, including actions predicated upon the civil liability provisions of U.S. federal securities laws or any other laws of the United States.

Additionally, rights predicated solely upon civil liability provisions of U.S. federal securities laws or any other laws of the United States may not be enforceable in original actions, or actions to enforce judgments obtained in U.S. courts, brought in Canadian courts, including courts in the Provinces of British Columbia and Alberta.

Furthermore, provisions in our articles will become effective upon receipt of shareholder approval and subsequent filing with corporate registry, and prior to the consummation of this offering provided that, unless we consent in writing to the selection of an alternative forum, the Court of Queen's Bench of Alberta and the appellate courts therefrom, to the fullest extent permitted by law, will be the sole and exclusive forum for certain actions or proceedings brought against us, our directors and/or our officers.

U.S. holders of the company's shares may suffer adverse tax consequences if we are characterized as a passive foreign investment company.

The rules governing "passive foreign investment companies," ("PFICs"), can have adverse effects on U.S. Holders (as defined under "Material U.S. Federal Income Tax Considerations for U.S. Holders") for U.S. federal income tax purposes. Generally, if, for any taxable year, at least 75% of our gross income is passive income, or at least 50% of the value of our assets (generally, using a quarterly average) is attributable to assets that produce passive income or are held for the production of passive income (including cash), we would be characterized as a PFIC for U.S. federal income tax purposes. The determination of whether we are a PFIC, which must be made annually after the close of each taxable year, depends on the particular facts and circumstances and may also be affected by the application of the PFIC rules, which are subject to differing interpretations. Our status as a PFIC will depend on the composition of our income and the composition and value of our assets (including goodwill and other intangible assets), which will be affected by how, and how quickly, we spend any cash that is raised in this offering or in any other financing transaction. Moreover, our ability to earn specific types of income that will be treated as non-passive for purposes of the PFIC rules is uncertain with respect to future years. We believe we were classified as a PFIC during the taxable year ended December 31, 2020. Based on current business plans and financial expectations, we may be a PFIC for our taxable year ending December 31, 2021, or future taxable years, and we cannot provide any assurances regarding our PFIC status for any current or future taxable years.

If we are a PFIC, a U.S. Holder would be subject to adverse U.S. federal income tax consequences, such as ineligibility for certain preferred tax rates on capital gains or on actual or deemed dividends, interest charges on certain taxes treated as deferred, and additional reporting requirements under U.S. federal income tax laws and regulations. A U.S. Holder may in certain circumstances mitigate adverse tax consequences of the PFIC rules by filing an election to treat the PFIC as a qualified electing fund, or QEF, or, if shares of the PFIC are "marketable stock" for purposes of the PFIC rules, by making a mark-to-market election with respect to the shares of the PFIC. U.S. Holders should be aware that, for each tax year, if any, that we are a PFIC, we can provide no assurances that we will satisfy the record keeping requirements of a PFIC, or that we will make available to U.S. Holders the information such U.S. Holders require to make a QEF election with respect to us, and as a result, a QEF election may not be available to U.S. Holders. For more information, see the discussion below under "Material U.S. Federal Income Tax Considerations to U.S. Holders—Passive Foreign Investment Company Rules". You should consult your own tax advisors regarding the potential consequences to you if we were or were to become a PFIC, including the availability, and advisability, of, and procedure for making, QEF elections and mark-to-market elections.

Our bylaws provide that any derivative actions, actions relating to breach of fiduciary duties and other matters relating to our internal affairs will be required to be litigated in Canada, which could limit shareholders' ability to obtain a favorable judicial forum for disputes with us.

We have included a forum selection provision in our bylaws that provides that, unless we consent in writing to the selection of an alternative forum, the Supreme Court of Alberta and appellate courts therefrom (or, failing such Court, any other "court" as defined in the CBCA, having jurisdiction, and the appellate courts therefrom), will be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action or proceeding asserting a breach of fiduciary duty owed by any of our directors, officers or other employees to us, (3) any action or proceeding asserting a claim arising pursuant to any provision of the CBCA or our articles or bylaws; or (4) any action or proceeding asserting a claim otherwise related to our "affairs" (as defined in the CBCA). Our forum selection provision also provides that our shareholders are deemed to have consented to personal jurisdiction in the Province of Alberta and to service of process on their counsel in any foreign action initiated in violation of our provision. Therefore, it may not be possible for shareholders to litigate any action relating to the foregoing matters outside of the Province of Alberta. To the fullest extent permitted by law, our forum selection provision will also apply to claims arising under U.S. federal securities laws. In addition, investors cannot waive compliance with U.S. federal securities laws and the rules and regulations thereunder.

Our forum selection provision seeks to reduce litigation costs and increase outcome predictability by requiring derivative actions and other matters relating to our affairs to be litigated in a single forum. While forum selection clauses in corporate charters and bylaws/articles are becoming more commonplace for public companies in the United States and have been upheld by courts in certain states, a recent decision of the Supreme Court of Canada has cast some uncertainty as to whether forum selection clauses would be upheld in Canada. Accordingly, it is possible that the validity of our forum selection provision could be challenged and that a court could rule that such provision is inapplicable or unenforceable. If a court were to find our forum selection provision inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions and we may not obtain the benefits of limiting jurisdiction to the courts selected.

Future sales and issuances of our common shares or rights to purchase common shares, including pursuant to our Stock Option and Incentive Plan, could result in additional dilution of the percentage ownership of our shareholders and could cause our share price to fall.

We expect that significant additional capital will be needed in the future to continue our planned operations, including conducting clinical trials, expanded research and development activities, and costs associated with operating as a public company. To raise capital, we may sell common shares, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common shares, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing shareholders, and new investors could gain rights, preferences, and privileges senior to the holders of our common shares, including securities sold in this offering.

Sales of a substantial number of our common shares by our existing shareholders in the public market could cause our share price to fall.

If our existing shareholders sell, or indicate an intention to sell, substantial amounts of our common shares in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common shares could decline. Based on the number of common shares outstanding as of , 2021, upon the closing of this offering, we will have outstanding a total of common shares. Of these shares, only the common shares sold in this offering by us, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable without restriction in the public market immediately following this offering, unless purchased by our affiliates. In connection with this offering, our officers, directors and significant shareholders have agreed to be subject to a contractual lock-up with the underwriters, which will expire 90 days after the date of this prospectus. The representatives, however, may, in their sole discretion, permit our officers, directors and other shareholders who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements.

Common shares that are either subject to outstanding options reserved for future issuance under our Equity Incentive Plan, will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 under the Securities Act of 1933, as amended, (the "Securities Act"). Additionally, common shares that are issuable upon the exercise of outstanding warrants to purchase our common shares, which will become warrants to purchase common shares in connection with the closing of this offering, will become eligible for sale in the public market to the extent permitted by the lock-up agreements and Rule 144 under the Securities Act. If these additional common shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common shares could decline.

We do not expect to pay dividends in the future. As a result, any return on investment may be limited to the value of our common stock.

We do not anticipate paying cash dividends on our common stock in the foreseeable future. The payment of dividends on our common stock will depend on our earnings, financial condition and other business and economic factors as our board of directors may consider relevant. If we do not pay dividends, our common shares may be less valuable because a return on an investment in our common shares will only occur if our stock price appreciates.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes "forward-looking statements" within the meaning of U.S. securities laws and "forward-looking information" within the meaning of Canadian securities laws, or collectively, forward-looking statements. Forward-looking statements include statements that may relate to our plans, objectives, goals, strategies, future events, future revenue or performance, capital expenditures, financing needs and other information that is not historical information. Many of these statements appear, in particular, under the headings "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business." Forward-looking statements can often be identified by the use of terminology such as "subject to", "believe," "anticipate," "plan," "expect," "intend," "estimate," "project," "may," "will," "should," "would," "could," "can," the negatives thereof, variations thereon and similar expressions, or by discussions of strategy. In addition, any statements or information that refer to expectations, beliefs, plans, projections, objectives, performance or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking. In particular, forward-looking statements in this prospectus include, but are not limited to, statements about:

- our ability to obtain additional financing;
- the accuracy of our estimates regarding expenses, future revenues and capital requirements;
- the success and timing of our preclinical studies and clinical trials;
- our ability to obtain and maintain regulatory approval of XORTO and any other product candidates we may develop, and the labeling under any approval we may obtain;
- regulatory developments in the United States and other countries;
- the performance of third-party manufacturers;
- our plans to develop and commercialize our product candidates;
- our ability to obtain and maintain intellectual property protection for our product candidates;
- the successful development of our sales and marketing capabilities;
- the potential markets for our product candidates and our ability to serve those markets;
- the rate and degree of market acceptance of any future products;
- the success of competing drugs that are or become available; and
- the loss of key scientific or management personnel.

All forward-looking statements, including, without limitation, our examination of historical operating trends, are based upon our current expectations and various assumptions. Certain assumptions made in preparing the forward-looking statements include:

- the availability of capital to fund planned expenditures;
- prevailing regulatory, tax and environmental laws and regulations;
- the ability to secure necessary personnel, equipment and services
- our ability to manage our growth effectively;
- the absence of material adverse changes in our industry or the global economy;
- trends in our industry and markets;
- our ability to maintain good business relationships with our strategic partners and partners;
- our ability to comply with current and future regulatory standards;
- our ability to protect our intellectual property rights;

- our continued compliance with third-party license terms and the non-infringement of third-party intellectual property rights;
- our ability to manage and integrate acquisitions; and
- our ability to raise sufficient debt or equity financing to support our continued growth.

We believe there is a reasonable basis for our expectations and beliefs, but they are inherently uncertain. We may not realize our expectations, and our beliefs may not prove correct. Actual results could differ materially from those described or implied by such forward-looking statements. The following uncertainties and factors, among others (including those set forth under "Risk Factors"), could affect future performance and cause actual results to differ materially from those matters expressed in or implied by forward-looking statements:

- our ability to obtain regulatory approval for our product candidates without significant delays;
- the predictive value of our current or planned clinical trials;
- delays with respect to the development and commercialization of our product candidates, which may cause increased costs or delay receipt of product revenue;
- our ability to enroll subjects in clinical trials and thereby complete trials on a timely basis;
- the design or our execution of clinical trials may not support regulatory approval;
- the potential for our product candidates to have undesirable side effects;
- our ability to face significant competition;
- no regulatory agency has made a determination that any of our product candidates are safe or effective for use by the general public or for any indication;
- the competitive threat of generic or other follow-on products;
- the likelihood of broad market acceptance of our product candidates;
- our ability to obtain Orphan Drug Designation or exclusivity for some or all of our product candidates;
- our ability to commercialize products outside of the United States;
- the outcome of reimbursement decisions by third-party payors relating to our products;
- our expectations with respect to the market opportunities for any product that we or our strategic partners develop;
- our ability to pursue product candidates that may be profitable or have a high likelihood of success;
- our ability to use and expand our therapeutic platforms to build a pipeline of product candidates;
- our ability to meet the requirements of ongoing regulatory review;
- the threat of product liability lawsuits against us or any of our strategic partners;
- changes in product candidate manufacturing or formulation that may result in additional costs or delay;
- the potential disruption of our business and dilution of our shareholdings associated with acquisitions and joint ventures;
- the potential for foreign governments to impose strict price controls;
- the risk of security breaches or data loss, which could compromise sensitive business or health information;
- current and future legislation that may increase the difficulty and cost of commercializing our product candidates;
- economic, political, regulatory and other risks associated with international operations;

- our exposure to legal and reputational penalties as a result of any of our current and future relationships with various third parties;
- our ability to comply with export control and import laws and regulations;
- our history of significant losses since inception;
- our ability to generate revenue from product sales and achieve profitability;
- our requirement for substantial additional funding;
- the potential dilution to our shareholders associated with future financings;
- unstable market and economic conditions;
- currency fluctuations and changes in foreign currency exchange rates;
- restrictions on our ability to seek financing, which are imposed by our current credit agreement and or may be imposed by future debt;
- our ability to maintain existing and future strategic partnerships;
- our ability to realize the anticipated benefits of our strategic partnerships;
- our ability to secure future strategic partners;
- our intention to rely on third-party manufacturers to produce our clinical product candidate supplies;
- our reliance on third parties to oversee clinical trials of our product candidates and, in some cases, maintain regulatory files for those product candidates;
- our reliance on the performance of independent clinical investigators and CROs;
- our reliance on third parties for various operational and administrative aspects of our business including our reliance on third parties' cloud-based software platforms;
- our ability to operate without infringing the patents and other proprietary rights of third parties;
- our ability to obtain and enforce patent protection for our product candidates and related technology;
- our patents could be found invalid or unenforceable if challenged;
- our intellectual property rights may not necessarily provide us with competitive advantages;
- we may become involved in expensive and time consuming patent lawsuits;
- we may be unable to protect the confidentiality of our proprietary information;
- the risk that the duration of our patents will not adequately protect our competitive position;
- our ability to obtain protection under the Hatch-Waxman Amendments and similar foreign legislation;
- our ability to comply with procedural and administrative requirements relating to our patents;
- the risk of claims challenging the inventorship of our patents and other intellectual property;
- our intellectual property rights for some of our product candidates are dependent on the abilities of third parties to assert and defend such rights;
- patent reform legislation and court decisions can diminish the value of patents in general, thereby impairing our ability to protect our products;
- we may not be able to protect our intellectual property rights throughout the world;

- we will require FDA approval for any proposed product candidate names and any failure or delay associated with such approval may adversely affect our business;
- the risk of employee misconduct including noncompliance with regulatory standards and insider trading;
- our ability to market our products in a manner that does not violate the law and subject us to civil or criminal penalties;
- if we do not comply with law regulating the protection of the environment and health and human safety, our business could be adversely affected;
- we risk losing our "foreign private issuer" status;
- our ability to retain key executives and attract and retain qualified personnel; and
- our ability to manage organizational growth.

Consequently, forward-looking statements should be regarded solely as our current plans, estimates and beliefs. You should not place undue reliance on forward-looking statements. We cannot guarantee future results, events, levels of activity, performance or achievements. We do not undertake and specifically decline any obligation to update, republish or revise forward-looking statements to reflect future events or circumstances or to reflect the occurrences of unanticipated events, except as required by law.

PRESENTATION OF FINANCIAL INFORMATION

We prepare and report our consolidated financial statements in accordance with IFRS. We maintain our books and records in Canadian dollars.

We have made rounding adjustments to some of the figures included in this prospectus. Accordingly, numerical figures shown as totals in some tables may not be an arithmetic aggregation of the figures that precede them.

EXCHANGE RATE DATA

We express all amounts in this prospectus in Canadian dollars, except where otherwise indicated. References to "$"are to Canadian dollars and references to "US$" are to U.S. dollars. The following table sets forth, for the periods indicated, average rate of exchange for one U.S. dollar, expressed in Canadian dollars, for the years ended December 31, 2020, 2019 and 2018, as supplied by the Bank of Canada:

Year Ended	Average
December 31, 2020	0.7454
December 31, 2019	0.7536
December 31, 2018	0.7718

On May 7, 2021, the Bank of Canada rate of exchange was $1.00 = US$ 0.8884.

MARKET, INDUSTRY AND OTHER DATA

Unless otherwise indicated, information contained in this prospectus concerning our industry and the market in which we operate, including our market position, market opportunity and market size, is based on information from various sources such as industry publications, on assumptions that we have made based on such data and other similar sources and on our knowledge of the markets for our products. These data involve a number of assumptions and limitations. We have not independently verified any third-party information.

In addition, projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate is necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section entitled "Risk Factors" and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

USE OF PROCEEDS

We estimate that the net proceeds from this offering will be approximately US$ million, based upon an assumed initial public offering price of US$ per common share and/or pre-funded warrant and accompanying Common Share Purchase Warrant, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their over-allotment option to purchase additional shares and/or pre-funded warrants from us in full, we estimate that the net proceeds will be approximately US$ million after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

A US$1.00 increase or decrease in the assumed initial public offering price of US$ per share and/or pre-funded warrant and accompanying Common Share Purchase Warrant, which was the U.S. dollar equivalent of the last reported sale price of our common shares on the CSE on , 2021, would increase or decrease the net proceeds to us from this offering by approximately US$ million, assuming the number of shares and/or pre-funded warrant and accompanying Common Share Purchase Warrants offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. An increase or decrease of 1,000,000 in the number of securities offered by us would increase or decrease the net proceeds to us from this offering by approximately US$ million, assuming the assumed initial public offering price remains the same and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We are undertaking this offering in order to increase our liquidity and raise capital to further develop and advance our pipeline of product candidates.

Unless otherwise indicated in a prospectus supplement, we currently intend to use the net proceeds from the sale of the securities offered hereby for general corporate purposes, which may include the further research and development, clinical trials, manufacture and commercialization of our product candidates and of our technologies, working capital, capital expenditures and other general corporate purposes. We may also use a portion of the net proceeds to acquire or invest in businesses, products and technologies that are complementary to our own, as well as for capital expenditures. We have not specifically allocated the proceeds to those purposes as of the date of this prospectus. The precise amount and timing of the application of proceeds from the sale of securities will depend on our funding requirements and the availability and cost of other funds at the time of sale. Allocation of proceeds of a particular series of securities, or the principal reason for the offering if no allocation has been made, will be described in the applicable prospectus supplement or in any related free writing prospectus.

DIVIDEND POLICY

We have never paid any dividends on our common shares or any of our other securities. We currently intend to retain any future earnings to finance the growth and development of our business, and we do not anticipate that we will declare or pay any cash dividends in the foreseeable future. Any future determination to pay cash dividends will be at the discretion of our board of directors and will be dependent upon our financial condition, results of operations, capital requirements, restrictions under any future indebtedness and other factors the board of directors deems relevant.

CAPITALIZATION

The following table sets forth our cash as well as capitalization as of December 31, 2020:

- on an actual basis; and
- on an as adjusted basis to give effect to the sale of securities offered hereby at the assumed combined offering price of US$ per security, which is the U.S. dollar equivalent of the last reported sale price of our common shares on the CSE on May , 2021, converted into U.S. dollars at $, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The assumed offering price may not be the final price of the Offering and will be adjusted based on the actual initial public offering price and other terms of our initial public offering determined at pricing.

You should read this table together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this prospectus, and our financial statements and related notes thereto.

	As of December 31, 2020		
	Actual		Pro forma as adjusted (1)
	(In thousands, except share data)		
Cash	$ 171	$	$
Deposits and other receivables	1,885		
Intangibles	234		
Total Assets	2,290		
Liabilities	1,034		
Equity			
Share capital	8,258		
Common Shares, unlimited authorized shares, without par value; 109,721,406 shares issued and outstanding, actual; shares issued and outstanding, pro forma as adjusted			
Obligation to Issue Shares	32		
Reserves	1,004		
Deficit	(8,038)		
Total Equity	$ 1,256	$	$
Total Liabilities and Equity	$ 2,290	$	$

(1) Pro-forma as adjusted does not give effect to the impact of Common Share Purchase Warrants.

Each US$1.00 increase (decrease) in the assumed combined public offering price of US$ per security, the U.S. dollar equivalent of the last reported sale price of our common shares on the CSE on May , 2021, would increase (decrease) the pro forma amount of cash and cash equivalents, total shareholders' equity and total capitalization by approximately US$ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of securities we are offering. Each increase (decrease) of 100,000 securities in the number of securities offered by us would increase (decrease) the pro forma amount of cash and cash equivalents, total shareholders' equity and total capitalization by approximately $ million, assuming that the assumed public offering price remains the same, and after deducting the estimated

underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

The number of common shares to be outstanding after this offering is based on an aggregate of 110,076,717 shares outstanding as of May 7, 2021. The table above excludes:

- 5,200,000 common shares issuable upon the exercise of outstanding options to issue common shares, as of May 7, 2021, at a weighted-average exercise price of $0.28 per share;

- 25,170,626 common shares issuable upon the exercise of outstanding common share warrants, as of May 7, 2021, at a weighted-average exercise price of $0.40 per share.

Unless otherwise indicated, the foregoing information assumes: (i) no issuance or exercise of stock options or warrants on or after May 7, 2021; and (ii) no exercise by the underwriters of their option to purchase up to an additional _____ common shares in this offering.

For additional information regarding our capital structure, see “Description of Share Capital.”

DILUTION

Investors purchasing common shares and/or pre-funded warrants and accompanying Common Share Purchase Warrants in this offering will experience immediate and substantial dilution in the as adjusted net tangible book value of their common shares. Dilution in as adjusted net tangible book value represents the difference between the public offering price per share and the as adjusted net tangible book value per common share immediately after the offering.

The historical net tangible book value of our common shares as of December 31, 2020 was $1,021,928 or $0.0126 per share. Historical net tangible book value per common share represents our total tangible assets (total assets less intangible assets) less total liabilities divided by the number of common shares outstanding as of that date.

After giving effect to the sale of common shares and/or pre-funded warrants and related Common Share Purchase Warrants in this offering at the assumed offering price of US$ per share, which was the U.S. dollar equivalent of the last reported sale price of our common shares on the CSE on , 2021, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our net tangible book value as of December 31, 2020 would have been $ million, or $ per share. The assumed offering price may not be the final price of the Offering and will be adjusted based on the actual initial public offering price and other terms of our initial public offering determined at pricing. This amount represents an immediate increase in net tangible book value of $ per share to our existing shareholders and an immediate dilution in net tangible book value of approximately $ per share to new investors purchasing our common shares in this offering. We determine dilution by subtracting the net tangible book value per share after the offering from the amount of cash that a new investor paid for a common share.

The following table illustrates this dilution on a per share basis:

Assumed offering price per common share and associated Common Share Purchase Warrant[1]	$	
Historical net tangible book value per share as of December 31, 2020	$	0.0126
Increase in net tangible book value per share attributable to Investors	$	
Net tangible book value per share after the offering	$	
Dilution per share to new investors	$	

(1) The assumed offering price may not be the final price of the offering and will be adjusted based on the actual initial public offering price and other terms of our initial public offering determined at pricing.

Each US$1.00 increase or decrease in the assumed combined public offering price of US$ per share and/or pre-funded warrant and related Common Share Purchase Warrant would increase or decrease our net tangible book value after this offering by approximately $ million, or approximately $ per share, and increase or decrease the dilution per share to new investors by approximately $ per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of common shares and/or pre-funded warrants we are offering. An increase or decrease of 100,000 shares in the number of common shares offered by us would increase or decrease our net tangible book value after this offering by approximately $ million, or $ per share, and increase or decrease the dilution per share to new investors by approximately $ per share, assuming that the assumed public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. The information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

The number of common shares to be outstanding after this offering is based on 110,076,717 common shares outstanding as of May 7, 2021, and excludes:

- 5,200,000 common shares issuable upon the exercise of outstanding options to issue common shares, as of May 7, 2021, at a weighted-average exercise price of $0.28 per share;
- 25,170,626 common shares issuable upon the exercise of outstanding common share warrants, as of May 7, 2021, at a weighted-average exercise price of $0.40 per share.

Unless otherwise indicated, the foregoing information assumes: (i) no issuance or exercise of stock options or warrants on or after May 7, 2021; and (ii) no exercise by the underwriters of their option to purchase up to an additional common shares in this offering.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations contains important information about XORTX's business and its performance for the years ended December 31, 2020 and2019 and should be read together with our consolidated financial statements, prepared in accordance with IFRS, and the related notes and the other financial information included elsewhere in this prospectus. Amounts for subtotal, totals and percentage variances included in tables may not sum or calculate using the numbers as they appear in the tables due to rounding. This discussion contains forward-looking statements that involve significant risks and uncertainties. Our actual results, performance and achievements could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those discussed below and elsewhere in this prospectus, particularly under "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements."

Overview

XORTX Therapeutics is a clinical-stage bio-pharmaceutical company, focused on identifying, developing and commercializing therapies to treat progressive kidney disease modulated by aberrant purine and uric acid metabolism and uric acid metabolism in orphan (rare) disease indications such as autosomal dominant polycystic kidney disease and larger, more prevalent T2DN and AKI due to coronavirus COVID-19 infection.

The primary development program for XORTX is at a late clinical stage and is focused on demonstrating the effectiveness and potential of a novel therapy for ADPKD, an orphan disease. In addition, XORTX continues to evaluate new chemical entities for T2DN.

The coronavirus COVID-19 program focuses on protecting kidney function when viral infection may lead to acute kidney injury. This program relies on oxypurinol's advanced clinical development stage and a new formulation of this product candidate to protect kidney structure and function.

Principal Products and Patents

Products

The Company's most advanced development program, XRx-008, is at a late clinical stage program focused on demonstrating the potential of our novel therapy for ADPKD. XRx-008 is the development name given to XORTX's proprietary oral formulation of oxypurinol, and shows increased oral bioavailability compared to oxypurinol alone. XORTX is also developing a second oral formulation of oxypurinol, XRx-101, for use in treating patients infected with the coronavirus COVID-19 infection and suppression of AKI and associated health consequences.

XORTX is currently evaluating xanthine oxidase inhibitor candidates for the XRx-225 program to treat T2DN as well as developing new chemical entities to address the large unmet medical need.

Patents

XORTX [has/is the exclusive licensee of] U.S. granted patents with claims to the use of all uric acid lowering agents to treat high blood pressure, insulin resistance or diabetic nephropathy, and U.S. patent applications with similar claims for the treatment of metabolic syndrome, diabetes, fatty liver disease as well as a composition of matter patent for formulations of xanthine oxidase inhibitors. Counterparts for some of these patent applications have also been submitted in Europe. Recently XORTX announced submission of a patent application to cover the use of uric acid lowering agents for the treatment of the health consequences of coronavirus COVID-19 infection. Additional patent applications to expand and extend coverage of uric acid lowering agents are currently under preparation.

Recent Developments

Private Placements

On February 9, 2021, the Company issued 24,486.286 units in a private placement offering at a subscription price of $0.25 per unit for gross proceeds of $6,121,572. Each unit comprised one common share of the Company and one common share purchase warrant. Each warrant entitles the holder, on exercise, to purchase one additional common share in the capital of the Company, at a price of $0.40, for a period of 5 years from the issuance of the units; provided, however, that, if, at any time following the expiry of the statutory four month hold period, the closing price of the common shares on the CSE is greater than $1.20 for 10 or more consecutive trading days, the warrants will be accelerated upon notice and the warrants will expire on the 30th calendar day following the date of such notice. In addition, the warrants are also subject to typical anti-dilution provisions and a ratchet provision that provides for an adjustment in the exercise price should the Company issue or sell common shares or securities convertible into common shares at a price (or conversion price, as applicable) less than the exercise price such that the exercise price shall be amended to match such lower price.

In connection with the private placement, the Company paid $171,085 in cash commissions and issued 684,340 finder's warrants. Each finder's warrant is exercisable into one common share at a price of $0.40 and having the same expiry, acceleration and anti-dilution provisions as the warrants included in the private placement. The common shares and warrants comprising the units issued pursuant to the private placement, and any common shares issued upon the exercise of the warrants or the finder's warrants, are subject to a four month hold period pursuant to applicable securities laws.

On February 28, 2020, the Company closed a first tranche of a 36,000,000 Unit Private Placement with the issuance of 18,259,427 Units for gross proceeds of $900,000 in cash and $50,000 on the conversion of certain payables into Units (while $1,606,320 in Units were issued in exchange for services to be provided). Each Unit was priced at $0.14 and comprised one common share and one common share purchase warrant exercisable at $0.25 for a period of one year from the issuance of the Units, provided, however, that if, at any time following the expiry of the statutory four month hold period, the closing price of the common shares on the CSE is greater than $0.35 for 10 or more consecutive trading days, the Company may notify the holder, by way of news release, that the warrants will expire on the 20th business day following the date of such notice, unless exercised by the holder before such date. The objective of this funding round is to advance ADPKD program toward a phase 3 registration trial in ADPKD,

December 2020 Notification from European Patent Office

On December 29, 2020, the Company the receipt of notification that the patent "Formulations of Xanthine Oxidase Inhibitors" will be granted by the European Patent Office. The patent covers compositions and methods of using XORTX's proprietary formulations of xanthine oxidase for, renal and other diseases where aberrant purine metabolism has been implicated in disease progression.

Partnership with Icahn School of Medicine

On November 16, 2020, the Company announced the topline results from the Company's partnership with the Icahn School of Medicine at Mount Sinai, New York ("Icahn School of Medicine"). The aim of this study was to characterize the incidence of AKI and hyperuricemia in patients hospitalized with COVID-19. The results of the data analysis show that in some individuals with COVID-19 infection, hyperuricemia increases early in and is associated with AKI. The data also strongly suggests that for those individuals with very high serum uric acid levels, this can contribute to worsening kidney outcomes. These topline results indicate that further clinical studies to lower uric acid in these individuals is warranted, and may improve AKI, dialysis, recovery and mortality outcomes.

Appointment of LONZA Group as Manufacturer

On April 30, 2020, the Company announced the appointment of LONZA Group as the manufacturer of GMP oxypurinol for the XRx-008 and XRx-101 clinical trial programs. The launch of oxypurinol manufacturing for both XRx-008 and XRx-101 is the first step to advance these programs toward clinical testing. Lonza is a leading global supplier to the pharmaceutical, biotech and specialty ingredients markets.

COVID-19 Developments

In March 2020, the outbreak of the novel strain of coronavirus, specifically identified as "Sars-CoV-2" which causes COVID-19 infections, resulted in governments worldwide enacting emergency measures to combat the spread of the virus. These measures, which include the implementation of travel bans, self-imposed quarantine periods and physical distancing, have caused material disruption to business globally resulting in an economic slowdown. Global equity markets have experienced significant volatility. The duration and impact of the COVID-19 Pandemic outbreak is unknown at this time, as is the efficacy of the government and central bank interventions. It is not possible to reliably estimate the length and severity of these developments and the impact on the financial results and condition of the Company in future periods.

On March 16, 2020, XORTX announced the filing of a provisional patent application covering the potential use of any uric acid lowering agent, and more specifically a xanthine oxidase inhibitor XRx-101 (we believe a novel formulation of oxypurinol), to treat respiratory and kidney disease injury related to patients infected with COVID-19.

Operating Results

The Company has a no history of earnings or cash flow from operations. The Company does not expect to generate material revenue or achieve self-sustaining operations for several years, if at all. To the extent that the Company has negative cash flow in future periods, the Company may need to allocate a portion of its cash reserves to fund such negative cash flow.

Three months ended December 31, 2020

Net Loss. The Company incurred a comprehensive loss of $452,725, or $0.01 per share, for the three months ended December 31, 2020 compared to $189,467, or $0.00 per share in the three months ended December 31, 2019. This increase was predominantly driven by an increase in expenses. The increased expenses were primarily driven by variances in the categories, and for the reasons, described below.

Consulting. For the three months ended December 31, 2020, consulting expenses increased by 54% compared to the three months ended December 31, 2019, from $25,436 to $39,172 as a result of more consultants being engaged during the quarter.

*Investor relations***.** For the three months ended December 31, 2020, investor relations expenses increased by 648% compared to the three months ended December 31, 2019, from $14,707 to $109,973, as the result of hiring investor relations consultants and public relations firms for marketing campaigns.

Professional fees. For the three months ended December 31, 2020, professional fees increased by 94% compared to the three months ended December 31, 2019, from $38,744 to $75,000 due to increased legal fees.

*Research and development***.** For the three months ended December 31, 2020, research and development expenses increased by 9205% compared to the three months ended December 31, 2019, from $1,532 to $142,548 due to increased research performed.

Impairment of intangible assets. For the three months ended December 31, 2020, impairment of intangible assets increased compared to the three months ended December 31, 2019, from $0 to $64,562 as a result of the Company determining that it was no longer feasible to complete the purchase option surrounding one of the intellectual property rights and writing off $64,562 of intangible assets to reduce the carrying value of the purchase option.

Recovery of provision. During the three months ended December 31, 2020, the Company had the option to pay $75,000 to purchase certain patent rights. However, during the three months ended December 31, 2020, the Company determined that it was no longer feasible and the provision was reversed.

Year ended December 31, 2020 compared to the year ended December 31, 2019

Net Loss. The Company incurred a comprehensive loss of $1,284,602, or $0.02 per share, for the year ended December 31, 2020 compared to $629,576, or $0.01 per share in the year ended December 31, 2019. This increase was predominantly driven by an increase in expenses. The increased expenses were primarily driven by the categories below

Consulting. For the year ended December 31, 2020, consulting expenses increased by 121% compared to the year ended December 31, 2019, from $46,561 to $102,880 due to an increase in non-clinical consultant activity.

*Investor relations***.** For the year ended December 31, 2020, investor relations expenses increased by 593% compared to the year ended December 31, 2019, from $34,782 to $241,177, as the result of hiring investor relations consultants and public relations firms for marketing campaigns.

Professional fees. For the year ended December 31, 2020, professional fees increased by 50% compared to the year ended December 31, 2019, from $108,427 to $162,580, due to an increase in legal fees.

*Research and development***.** For the year ended December 31, 2020, research and development expenses increased by 595% compared to the year ended December 31, 2019, from $39,897 to $277,455 due to the commencement of work by Cato Research Canada ("Cato"), Bend Research ("Lonza") and Icahn School of Medicine.

Share-based payments. For the year ended December 31, 2020, share-based payments increased by 1015% compared to the year ended December 31, 2019, from $26,317 to $293,443 due to 3,300,000 options being granted to directors, officers, and consultants.

Impairment of intangible assets. For the year ended December 31, 2020, impairment of intangible assets increased compared to the year ended December 31, 2019, from $0 to $64,562 as a result of the Company determining that it was no longer feasible to complete the purchase option surrounding one of the intellectual property rights and writing off $64,562 of intangible assets to reduce the carrying value of the purchase option.

Recovery of provision. During the year ended December 31, 2020, the Company had the option to pay $75,000 to purchase certain patent rights. However, during the year ended December 31, 2020, the Company determined that it was no longer feasible and the provision was reversed.

Research and Development Expense

Research and development expenses consist of expenses incurred in performing research and development activities. These expenses include conducting research experiments, preclinical studies, and other indirect expenses in support of advancing our product candidates and therapeutic platforms. The following items are included in research and development expenses:

- employee-related expenses such as salaries and benefits;
- employee-related overhead expenses such as facilities and other allocated items;
- share-based compensation expense to employees and consultants engaged in research and development activities;
- depreciation of laboratory equipment, computers and leasehold improvements;
- fees paid to consultants, subcontractors, CROs, and other third party vendors for work performed under our clinical trials and preclinical studies, including but not limited to laboratory work and analysis, database management, statistical analysis, and other items; and
- amounts paid to vendors and suppliers for laboratory supplies.

The following table shows a summary of our research and development expenses for the years ended December 31, 2020, 2019 and 2018.

	Year Ended December 31,		
	2020	**2019**	**2018**
Research and development expense			
	$ 277,455	$ 39,897	$ 342,851
Other research activities	—	—	—
Total research and development expense	$ 277,455	$ 39,897	$ 342,851
Less: Government credits	—	—	—
	$ 277,455	$ 39,897	$ 342,851

General and Administrative Expense

General and administrative expenses consist of salaries and related benefit costs for employees in our executive, finance, intellectual property, business development, human resources and other support functions, legal and professional fees, and travel and general office expenses. We expect to incur additional expenses related to supporting our ongoing research and development activities, operating as a public company and other administrative expenses.

Other Income (Expense)

Other income (expense) consists of accretion on convertible debt, interest expenses and foreign exchange gains and losses, as well as one-time items such as impairment charges, forgiveness of debt and recoveries of expenses.

Liquidity and Capital Resources

As at December 31, 2020, the Company had a cash balance of $171,271 and working capital of $1,021,928 as compared to a cash balance of $58,614 and a working capital deficiency of $484,450 as at December 31, 2019. During the period, the Company closed the private placement of 18,259,427 Units for gross proceeds of $2,556,319. The Company's primary source of funding is by way of raising capital through the issuance of equity to third party investors. Given the nature of the Company's low monthly expenses and that favorable repayment agreements relating to existing outstanding accounts payable, including that $518,084 of the existing accounts payable and accrued liability balances are due to related parties, the Company believes that its current cash resources are sufficient for it to meet its existing monthly expenses, however additional funding to meet its obligations with regard to current outstanding accounts payable and for the Company to undertake its business plan will be required.

Although there is no certainty, management is of the opinion that additional funding for its projects and operations can be raised as needed. The Company is subject to a number of risks associated with the successful development of new products and their marketing and the conduct of its clinical studies and their results. The Company will have to finance its research and development activities and its clinical studies. To achieve the objectives in its business plan, the Company plans to raise the necessary capital and to generate revenues. It is anticipated that the products developed by the Company will require approval from the FDA and equivalent organizations in other countries before their sale can be authorized. If the Company is unsuccessful in obtaining adequate financing in the future, research activities will be postponed until market conditions improve. These circumstances and conditions may cast significant doubt about the Company's ability to continue as a going concern.

Cash Flows

The following table represents a summary of our cash flows for the years ended December 31, 2020 and 2019:

	Year Ended December 31,	
	2020	**2019**
Net cash provided by (used in):		
Operating activities	$ (728,401)	$ (249,580)
Investing activities	(14,350)	(7,037)
Financing activities	855,408	55,212
Net increase (decrease) in cash and cash equivalents		

Operating Activities

Cash used in operating activities for the year ended December 31, 2020 was $728,401, compared to $249,580 for the year ended December 31, 2019. The increase of cash used of $393,821 was primarily due to the increased research and development activities, expenses related to expanding and growing our business, and expenses related to being a public company in Canada.

Investing Activities

Cash used in investing activities for the year ended December 31, 2020 was $14,350, compared to $7,037 for the year ended December 31, 2019. The increase of cash used was primarily due to the acquisition of intangible assets during the period.

Financing Activities

Cash provided by financing activities in the year ended December 31, 2020 was $855,408, compared to $55,212 for the year ended December 31, 2019. The increase in cash provided was due primarily to the private placement that took place during the period raising gross proceeds of $2,556,320 through the issuance of 18,259,427, at a price of $0.14 per unit, of which $900,000 was received in cash.

Funding Requirements

We have not generated any revenue from product sales to date and do not expect to do so until such time as we obtain regulatory approval of and commercialize one or more of our product candidates. As we are currently in clinical and preclinical stages of development, it will be some time before we expect to achieve this and it is uncertain that we ever will. We expect that we will continue to increase our operating expenses in connection with ongoing clinical trials and preclinical activities and the development of product candidates in our pipeline. We expect to continue our strategic partnerships and will look for additional collaboration opportunities. We also expect to continue our efforts to pursue additional grants and refundable tax credits from the Canadian government in order to further our research and development. Although it is difficult to predict our funding requirements, based upon our current operating plan, we anticipate that our existing cash and cash equivalents and short term investments as of December 31, 2020, combined with the net proceeds of this offering, will enable us to advance the clinical development of XRx-008 and XRx-101 product candidates. We may also be eligible to receive certain research, development and commercial milestone payments in the future, as described under "Business – Strategic Partnerships and Collaborations." However, because successful development of our product candidates and the achievement of milestones by our strategic partners is uncertain, we are unable to estimate the actual funds we will require to complete the research, development and commercialization of product candidates.

Contractual Obligations and Contingent Liabilities

Lease Commitments

The Company does not have any lease commitments.

Other Commitments

The Company has entered into a long-term employment agreement with the President and CEO of the Company. The agreement has a termination clause whereby he is entitled to the equivalent of 12 times his then current monthly salary which, as of December 31, 2020 equated to $192,000.

Off-Balance Sheet Arrangements

We have no material undisclosed off-balance sheet arrangements that have or are reasonably likely to have, a current or future effect on our results of operations or financial condition.

Financial and Capital Risk Management

The Company's financial instruments consist of cash, accounts payable and accrued liabilities, and the liability component on convertible loans. These financial instruments are classified as financial assets at FVTPL and financial liabilities at amortized cost. The fair values of these financial instruments approximate their carrying values at December 31, 2020, due to their short-term nature. The Company thoroughly examines the various financial instruments and risks to which it is exposed and assesses the impact and likelihood of those risks. These risks include foreign currency risk, interest rate risk, market risk, credit risk, and liquidity risk. Where material, these risks are reviewed and monitored by the Board of Directors.

The Company is exposed to foreign currency fluctuations for general and administrative transactions denominated in Canadian Dollars. The majority of the Company's cash is kept in Canadian dollars. As at December 31, 2020 the Company had an insignificant amount of cash denominated in US dollars that was subject to exchange rate fluctuations between the Canadian dollar and the U.S. dollar.

Application of Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in accordance with IFRS. The preparation of these financial statements requires us to make estimates and assumptions that amounts reported in our consolidated financial statements and accompanying notes. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances. The Company is subject to uncertainties such as the impact of future events, economic and political factors, and changes in the Company's business environment; therefore, actual results could differ from these estimates. Accordingly, the accounting estimates used in the preparation of the Company's consolidated financial statements will change as new events occur, as more experience is acquired, as additional information is obtained, and as the Company's operating environment evolves.

We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates. See Note 3 to our consolidated financial statements appearing at the end of this prospectus for a description of our other significant accounting policies.

Segment Reporting

We view our operations and manage our business in one segment, which is the development and commercialization of bio-pharmaceuticals, initially focused on the treatment of progressive kidney disease.

Trend Information

Other than as disclosed elsewhere in this prospectus, we are not aware of any trends, uncertainties, demands, commitments, or events that are reasonably likely to have a material effect on our net revenues, income from continuing operations, profitability, liquidity or capital resources, or that would cause reported financial information not necessarily to be indicative of future operating results or financial condition.

BUSINESS

Overview

XORTX Therapeutics is a clinical-stage bio-pharmaceutical company, focused on identifying, developing and commercializing therapies to treat progressive kidney disease modulated by aberrant purine and uric acid metabolism and uric acid metabolism in orphan (rare) disease indications such as autosomal dominant polycystic kidney disease and larger, more prevalent T2DN and AKI due to coronavirus COVID-19 infection.

Our focus is on developing three therapeutic products to slow or reverse the progression of kidney disease in patients at risk of end stage kidney failure, address the immediate need of individuals facing coronavirus COVID-19 infection induced AKI, and the identification of other opportunities where our existing and new intellectual property can be leveraged to address health issues. We believe that our innovative technology is underpinned by well-established research and insights into the underlying biology of oxypurinol, a powerful uric acid lowering agent that works by effectively inhibiting xanthine oxidase. We combine the power of oxypurinol with our capacity to improve existing drugs that can be adapted for different disease indications where elevated uric acid is a common denominator, including polycystic kidney disease, pre-diabetes, insulin resistance, metabolic syndrome, diabetes, diabetic nephropathy, and infections. Oxypurinol, and our proprietary pipeline-in-a-product strategy supported by our intellectual property, established exclusive manufacturing agreements, and proposed clinical trials with experienced clinicians, are focused on building a robust pipeline of assets to address the unmet medical needs for patients with a variety of serious or life-threatening diseases.

Our three lead product candidates are XRx-008, a novel program for the treatment of ADPKD; XRx-101, a program for the treatment of COVID-19, AKI and associated health consequences; and XRx-225, a program for the treatment of T2DN. At XORTX Therapeutics, we aim to redefine the treatment of kidney diseases by developing medications to improve the quality-of-life of patients with life-threatening diseases by lowering elevated uric acid as a therapy.

Overview of our Proprietary Therapeutic Platforms

Our expertise and understanding of the pathological effects of aberrant purine metabolism combined with our understanding of uric acid lowering agent structure and function, has enabled the development of our proprietary therapeutic platforms. These are a complementary suite of therapeutic formulations designed to provide unique solutions for acute and chronic disease. Our therapeutic platforms can be used alone, or in combination, with synergistic activity, to develop a multifunctional tailored approach to a variety of disease entities that can address disease in multiple body systems through management of chronic or acute hyperuricemia, immune modulation, and metabolic disease. We continue to leverage these therapeutic platforms to expand our pipeline of first in class and next generation drug-based therapies that we believe could represent significant improvements to the standard of care in multiple acute and chronic cardiovascular diseases and specifically kidney disease.

We believe our in-house product candidate design and formulation capabilities confer significant competitive advantage to our therapeutic platforms and are ultimately reflected in our programs. Some of these key advantages are:

Highly modular and customizable.

Our platforms can be combined in multiple ways and this synergy can be applied to address acute, intermittent or chronic disease progression. For example, our XRx-101 program for AKI is designed to produce rapid suppression of hyperuricemia, then maintain purine metabolism. Our XRx-008 program is designed for longer term stable chronic oral dosing of xanthine oxidase inhibitors. We believe that the capabilities of our formulation technology may allow us to manage the unique challenges of cardiovascular and renal disease by modulating, purine metabolism, inflammatory and oxidative state.

Fit-for-purpose.

Our platforms can also be utilized to engineer new chemical entities and formulations of those agents that have enhanced properties. For example, XRx-225 represents a new class of xanthine oxidase inhibitor with a targeted design to enhance anti-inflammatory activity. The capability of tailoring the therapeutic benefit of this class of new

agents may permit us to identify targets and disease that we wish to exploit and then, through formulation design, optimize those small molecules and proprietary formulations to maximize clinically meaningful therapeutic effect.

Readily scalable and transferable.

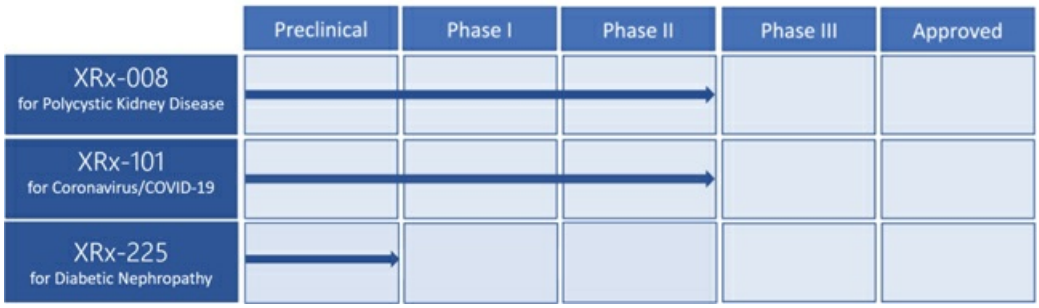
Our in-house small molecule and formulations design expertise is positioned to create a steady succession of product candidates that are scalable, efficient to manufacture (by a partner, contract manufacturing organizations or us), and produce high production and high purity active pharmaceutical product candidates. We believe this will provide a significant competitive advantage, new intellectual property and opportunity to provide novel products that target unmet medical needs and clinically meaningful quality of life.

Our team's expertise in uric acid lowering agents, specifically in the development and use of xanthine oxidase inhibitors, has enabled the development of our therapeutic platforms to treat the symptoms of, and potentially delay the progression of, ADPKD, chronic, and acute kidney disease.

Product Candidate Pipeline

Our lead product candidates are XRx-008, XRx-101 and XRx-225. XRx-008 is in preparations for a Phase 3 registration clinical trial, the last stage of clinical development before FDA approval. Our XRx-101 program is preparing for a "bridging" pharmacokinetic study in advance of the Company's planned Phase 3 clinical trial to slow or reverse acute kidney disease in hospitalized individuals infected with COVID-19. XRx-225 is at the non-clinical stage and advancing toward clinical development stages.

XORTX Therapeutics Pipeline:



Our Strategy

Our goal is to apply our interdisciplinary expertise and pipeline-in-a-product strategy to further identify, develop and commercialize novel treatments in orphan indications, with an initial focus on renal and significant unmet medical needs. To achieve this objective, we intend to pursue the following strategies:

1. Rapidly and efficiently advance XRx-008 through Phase 3 clinical development and regulatory approval in order to establish a new standard of care for ADPKD.

2. Maximize the potential of XRx-008, if approved, through commercialization independently and through opportunistic collaborations with third parties.

3. Leverage our pipeline-in-a-product strategy, developing additional proprietary formulations leveraging our experience selecting orphan indications and complementing our developments through acquisitions or in-licensing opportunities in nephrology and diabetes when opportunities arise.

Background

Uric acid is an essential molecule necessary for excretion of excess nutrients. However, at chronically high levels, serum uric acid ("SUA") acts through a newly discovered mechanism to cause disease. If untreated, high uric acid levels may eventually lead to permanent bone, joint and tissue damage, kidney disease, such as ADPKD and AKI, and heart disease. Research has also shown a link between high uric acid levels and cardiovascular and renal diseases, hypertension, insulin resistance, type 2 diabetes, high blood pressure, and fatty liver disease. We are focusing on a pipeline-in-a-product strategy with new applications of selected product candidates that treat such diseases and conditions related to high SUA, particularly ADPKD.

The Polycystic Kidney Disease Foundation defines ADPKD as one of the most common life-threatening genetic diseases. In ADPKD, fluid-filled cysts develop and enlarge in both kidneys, eventually leading to kidney failure. The average size of a typical kidney is a human fist, but polycystic kidneys can get much larger, some growing as large as a football, and can weigh up to 30 pounds each. In 2014, close to 32,000 patients on long-term renal therapy were attributable to ADPKD, making it the fourth leading cause of new kidney disease cases behind diabetes, hypertension, and glomerulonephritis in the U.S. The estimated 140,000 diagnosed cases of ADPKD in the U.S. includes an annual incidence of approximately 2,500 new patients every year, and we believe a greater number of patients remain undiagnosed. In Europe, ADPKD had a prevalence of approximately 176,000 cases and an incidence of new patients of approximately 2,800 per year. Currently in the U.S. and Europe, an average of 5% to 8% of ADPKD patients are on renal therapy, patients are typically over fifty years old, demonstrating that ADPKD is a progressive disease with a high unmet medical need.

ADPKD represents 85% of polycystic kidney disease cases and is amongst the most rapidly progressing form of polycystic kidney disease, and is the most significant genetic cause of kidney failure. ADPKD is caused by mutations from the PKD1 or PKD2 genes, which encode for proteins called polycystin-1 and polycystin-2, respectively. Continued efforts are underway to better understand the different roles of inflammation, mitochondrial dysfunction and uric acid in the pathophysiology ADPKD. Multiple therapeutic strategies have been attempted to slow progression to renal disease with few successes, thus ADPKD remains a significant unmet medical need.

The onset of ADPKD is often diagnosed at ages between 30 to 50 years. Common symptoms of ADPKD include increased SUA, hypertension, endothelial dysfunction, increased protein in the urine and decreased filtering capacity. ADPKD is a painful disease that impacts quality of life, and nearly 50% of individuals diagnosed with ADPKD progress to end stage renal disease ("ESRD") by the age of 60. Once a person has ESRD, dialysis or a transplant are the only treatment options. Approximately 5% of all individuals on dialysis are ADPKD patients. As ADPKD progresses, patients and treating physicians currently have limited therapeutic options to slow or halt progression toward ESRD.

Even in the absence of kidney disease, increased SUA has been associated with vascular injury and inflammation, increased blood pressure, associated with endothelial dysfunction, increase proteinuria, and initiation of kidney injury. In the setting of ADPKD, high SUA has been reported to be an independent risk factor for greater cyst number, faster cyst growth and so increased total kidney volume as well as increased rate of decline of filtering capacity.

High levels of SUA, or hyperuricemia, can increase high blood pressure, blood vessel injury, endothelial dysfunction and inflammation within the cardiovascular system and specifically the kidney. Hyperuricemia effects in the kidney are particularly concerning. Independently conducted phase 2 clinical trial pilot studies show that therapy to decrease uric acid in chronic progressing kidney disease can improve endothelial dysfunction, decrease proteinuria and suggest a slowing of the rate of filtering capacity decline in patients.

Data suggests that uric acid may be a major culprit in cardiovascular disease when acute, intermittent and/or chronically increased. Increased SUA is reported to modulate injury of the cardiovascular and renal system by acting through intracellular effects and extracellular effects. Increased xanthine oxidase expression is also reported in disease settings and as a mechanism of injury of the kidney. In fact, five types of data attest that high levels of uric acid, even without fully diagnosed kidney disease, is harmful. Firstly, exogenous uric acid causes endothelial dysfunction when infused into the human brachial artery. Secondly, endogenous uric acid concentrations correlate with endothelial dysfunction. Thirdly, population studies show uric acid is an independent predictor of mortality, including one large study in patients with chronic heart failure. Fourthly, SUA is an independent risk factor for kidney disease. Fifthly, acute increases in circulating uric acid due to tumor lysis, crushing trauma and major cardiac surgery has been associated with acute organ injury and specifically AKI. Most recently, SUA has been identified as a risk factor predicting worse AKI outcomes during COVID-19 infection & AKI severity is correlated with mortality. Critically, patients with hyperuricemia and chronic kidney disease currently have few treatment options.

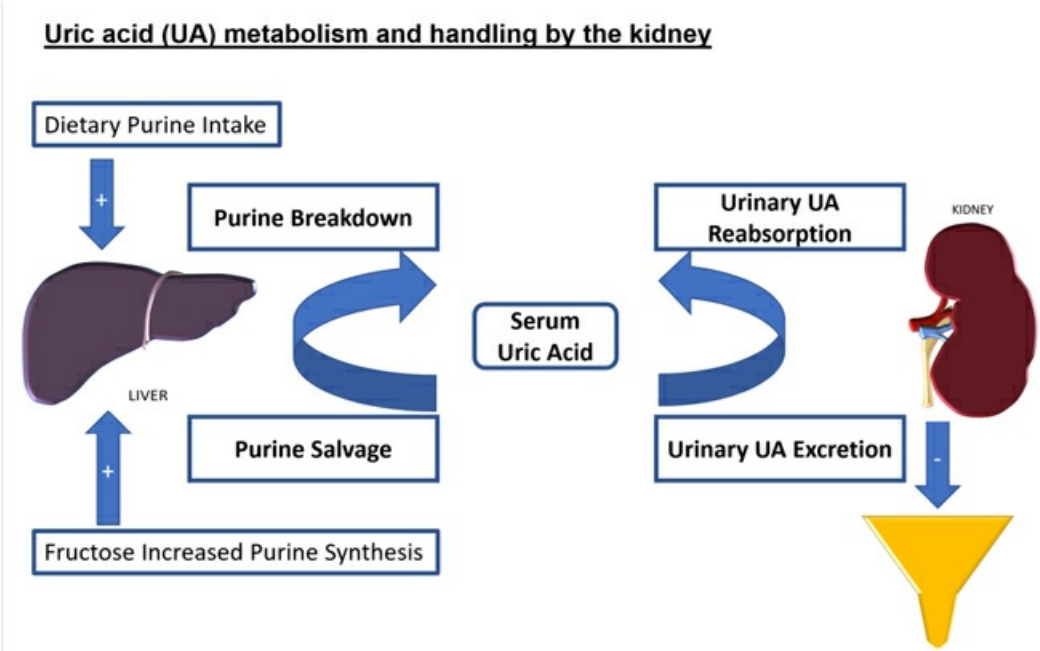


Figure 1: Dietary sources of purines such as yeast, shellfish, organ meats can lead to increased nucleic acids and purines in the circulation. Both are broken down by the liver into uric acid for excretion. Fructose stimulates the liver to produce endogenous purines and can lead to increase serum uric acid. Prior to arrival at the bladder, uric acid can be reabsorbed by the kidney for re-use as a building block for new purine and nucleotide synthesis.

Current Therapies and Treatments in Development

For the vast majority of patients diagnosed with kidney disease before ESRD, the standard of care is generally to attempt to decrease the amounts of uric acid in the patient. There are three classes of uric acid lowering agents that are generally in use today: xanthine oxidase inhibitors, such as allopurinol and febuxostat; uricosurics; and injectable enzymes. In addition to the approved treatments discussed above, there are multiple therapies currently in late-stage clinical development for the treatment of patients with ADPKD, which include bardoxolone, venglustat, and lixivaptan, GLPG2737, RGLS4326 and NV-20494.

XORTX Small Molecule Therapeutics

Small molecule therapeutics and biologics have led to improvements in kidney disease patient outcomes compared to more traditional therapies. However, some patients acquire resistance to, become refractory to, or cannot tolerate the increased toxicity of current treatments. Importantly, these treatments often only delay disease progression. As a result, there is a need for new therapies with improved, long-lasting efficacy and reduced toxicity. We believe the future of treatment of kidney diseases will be defined by multifunctional therapeutics specifically designed to act through several synergistic mechanisms of action to enhance efficacy, overcome resistance and minimize side effects. Furthermore, we believe our proprietary small molecule and formulation program innovations and engineering capabilities and our integrated small molecule discovery engine uniquely enable us to develop the next generation of kidney therapeutics, including new molecular entities with secondary pharmacologic effects, to help address this treatment gap. Our suite of proprietary therapeutic platforms uniquely allows us to utilize all of the above approaches in our mission to allow patients to manage and control the negative symptoms and progression of kidney disease.

XORTX Competitive Advantage

We are led by an experienced and dedicated management team whose average experience exceeds 15 years in the pharmaceutical industry, including several leading pharmaceutical companies. Our board of directors includes

highly qualified researchers, pharmaceutical senior executives and experts in the fields of drug development, corporate development and pharmaceutical commercialization. We are supported by a highly regarded network of leading experts within the field of ADPKD, including prominent ADPKD specialists throughout the world, that serve as external advisors and investigators on clinical trials in ADPKD, chronic and acute kidney disease.

Despite a need for new therapies, there have been few new drugs developed for chronic kidney diseases. We believe our proprietary formulation of xanthine oxidase inhibitors, particularly XRx-008, could become a significant treatment option for patients suffering from ADPKD.

In addition, XRx-008 received an important endorsement from the Polycystic Kidney Disease Foundation, and we are collaborating with the foundation to define the beneficial effects of our therapies in ADPKD patients, and potentially in other forms of polycystic kidney disease as well. We believe that there are substantial benefits to working with the leading polycystic kidney disease foundation in the world and that this collaboration on the development of treatments could redefine how physicians treat this disease in the future.

The overall estimated healthcare costs to treat ADPKD patients ranges from $7.3 billion to $9.6 billion per year (or $52,000 to $68,000 per patient annually). In addition, kidney disease can progress to a stage where it requires dialysis as a treatment, which is estimated to cost patients an average of $100,000 per year. We expect our products to be significantly more cost-effective for patients being treated for kidney disease, which we believe could give us a significant competitive advantage over existing treatments.

Product Candidate Pipeline

XRx-008

Overview

XRx-008 is a program designed to decrease the chronic injury associated with kidney disease in patients with ADPKD. Common symptoms of ADPKD include increased SUA, hypertension, endothelial dysfunction, increased protein in the urine and decreased filtering capacity. For many ADPKD patients, uric acid levels are increased above the normal range, and in many instances result in the onset of gout. As ADPKD progresses, patients and treating physicians currently have limited therapeutic options to slow or halt progression toward ESRD.

Current treatment of diseases

One of the current established treatments for gout is allopurinol, which is a xanthine oxidase inhibitor for the purpose of decreasing production of SUA. More recently, another treatment, oxypurinol, has been developed as an alternative to allopurinol. Oxypurinol was developed as an alternative to allopurinol.

Potential Advantages of XRx-008

XRx-008, under our granted formulation patent, is intended to be administered once daily to decrease uric acid production by xanthine oxidase, thereby decreasing chronic injury associated with progressing kidney disease in patient with ADPKD. Decreasing the production of uric acid is expected to decrease systemic and kidney inflammation, decrease the rate of initiation of cyst genesis and cyst growth, reverse endothelial dysfunction, decrease proteinuria, and decrease the rate of decline of kidney filtering capacity, to the benefit of patients with ADPKD.

We believe our proprietary formulation of xanthine oxidase inhibitors XRx-008 could become a significant treatment option for patients suffering from ADPKD. We believe XRx-008 can increase the bioavailability of oxypurinol. So far, over 600 patients have been treated clinically with oxypurinol, and results have shown that the rate of rash and liver enzyme elevation is substantially reduced, suggesting that oxypurinol is superior in terms of tolerability to allopurinol. XRx-008 includes the addition of L-Arginine as bioavailability enhancer and demonstrated nephron-protective effect. Therefore, our patented formulation of oxypurinol is expected to provide an additional benefit compared to allopurinol alone. A therapeutic intervention to reduce uric acid could provide a treatment modality that ultimately reduces inflammation and modifies the underlying disease pathology. There have been no adverse events reported that are unique to oxypurinol. Importantly, in this group of over 600 patients exposed to oxypurinol, no serious adverse events related to Stevens-Johnson Syndrome have been reported.

If XRx-008 is approved and launched commercially for patients with ADPKD, it would fit well in combination with other pulmonary and cardiovascular products. For example, Otsuka's current cardiovascular and renal portfolio includes Entresto, Jynarque, and Samsca. The physicians prescribing these products overlap significantly with the physicians expected to prescribe XRx-008 upon approval.

Anticipated clinical development of XRx-008

The XRx-008 program is preparing for a bridging pharmacokinetic study to describe the bioavailability of this unique formulation and characterize the oral dosing for the Company's Phase 3 clinical trial to slow or reverse progression of kidney disease in subjects with ADPKD. XRx-008 is preparing for last stage of clinical development before FDA approval. A number of completed clinical studies support regulatory filing of the XRx-008 program. Oxypurinol, a significant part of XRx-008, is not yet approved for marketing anywhere in the world, though it has previously received FDA review under an NDA filing. We believe XRx-008 falls under the FDA 505(b)(2) developmental pathway supporting a reformulation of oxypurinol with increased bioavailability and superior tolerability compared to allopurinol. We are pursuing a regulatory pathway pursuant to Section 505(b)(2) of the FDCA, and plan to pursue the hybrid application of the EU Centralized Procedure pursuant to article 10(3) of Directive 2001/83/EC, for the approval of this product.

XRx-101

Overview

Our second program, XRx-101, is being developed for the treatment of COVID-19 patients. Approximately 10% individuals with COVID-19 infection are hospitalized. At the time of hospitalization, over 60% of individuals show evidence of AKI within the 24 hours prior to or after hospitalization. Many of these individuals have SUA over 7.5 mg/dL - a concentration of SUA associated with saturation of the circulatory system, crystal formation, and acute organ injury. Uric acid crystal formation in the blood has been associated with AKI in the setting of tumor lysis, after major cardiac surgery and crushing trauma. In this setting, efforts to rapidly decrease SUA concentrations have shown promise for decreasing acute injury and improve prognosis. When uric acid crystals form in the blood, acute injury to blood vessel, lungs, kidneys and heart has been described in the literature. Strategically, for hospitalized patients with COVID-19 infection and evidence of high uric acid accompanied by evidence of AKI, rapidly decreasing SUA concentration may represent an important treatment to protect kidneys and other organ function.

Since over 30% of people infected with COVID-19 also had diabetes as co-morbidity, we believe that it is plausible that uric acid is also elevated in these individuals prior to infection and that XRx-101 could potentially become a valid treatment for this patient group. Elevated uric acid is highly correlated with inflammation which has been the primary diagnostic among all the more infected people with the virus which then leads to a worsen clinical outcome. Studies have shown a strong association between elevated IL-6 and Creatinine Reactive Protein ("CRP") inflammation markers and worsening outcomes leading to the Intensive Care or death. A recent study by Jamie Hirsh, et al., titled *Acute kidney injury in patients hospitalized with COVID-19* (Clinical Investigation 2020; 98: 209), analyzed health records of 5,449 hospitalized patients, and showed that 36.6% developed AKI. Among those patients with AKI, 35% died, 26% were discharged and 39% were still hospitalized as of the publishing of the Hirsh's report. In March 2021, a group of nephrologists and scientists from Yale published a peer-reviewed paper at JAMA, titled *Assessment of Acute Kidney Injury and Longitudinal Kidney Function After Hospital Discharge Among Patients With and Without COVID-19* (JAMA Netw Open. 2021;4(3):e211095), showing that in a cohort study of 1612 patients with AKI monitored after their index hospitalization, estimated glomerular filtration rate declined by 11.3 mL/min/1.73 m2 per year faster in patients with COVID-19–associated AKI compared with patients with AKI not associated with COVID-19. This finding persisted after adjusting for patient's baseline comorbidities and severity of AKI.

Current treatment of diseases

Currently, only one drug, Remdesvir, has been approved by the FDA for treatment of COVID-19 infections. Additional drugs REGN-COV2, bamlanivimab, bamlanivimab in combination with etesevimab, convalescent plasma, and baricitinib, have been authorized for COVID-19 treatment under the FDA Emergency Use Authorization ("EUA"), and a further two drugs, dexamethasone and tocilizumab, have been approved under the National Institute of Health Guidance. There are currently no approved drugs to treat patients with COVID-19 who are at high risk of kidney failure.

Potential Advantages of XRx-101

XRx-101 is a therapeutic treatment to suppress the COVID-19 infections, suppress symptoms and protect kidneys from AKI and other kidney disease that may occur due to COVID-19 in patients hospitalized and treated in intensive care units ("ICU"). XRx-101 is a combination of two uric acid lowering agents in a unique treatment regimen that will target both rapid and sustained uric acid lowering, to protect kidney another organ systems from acute injury during hospitalization for COVID infection. The aim of XRx-101 is to treat hospitalized patients early, decrease high SUA concentrations at or early after hospitalization and minimize acute injury and the future health consequences COVID-19 infection. We believe this could be a unique opportunity since currently no drugs are approved for AKI, and we believe XRx-101 will be the first product candidate intended to treat patients with COVID-19 who are at high risk of kidney failure.

Anticipated clinical development of XRx-101

In previous studies, oxypurinol has clinically demonstrated the ability to inhibit break down purine and pyrimidine nucleotides to uric acid, decreasing the production of tissue uric acid and SUA from reaching saturation and crystal formation in the circulation and specifically kidneys.

We expect our Phase 3 pivotal clinical trial will further demonstrate that XRx-101 could attenuate acute tissue injuries in the setting of COVID-19 infection. This clinical development program will target and characterize the kidney protective effects of this novel therapy and initiate a clinical trial within the next 12 months. XRx-101 could be a potential treatment for COVID-19 patients who are hospitalized, to protect against AKI. Two key studies, one in a mouse model of influenza and another in herpes infection, have shown that XRx-101 can act as an anti-viral, lower uric acid, and also protect organs. In the setting of serious viral infection and acute tissue damage, XRx-101 can act to inhibit xanthine oxidase expression due to hypoxia or tissue destruction, therefore preventing increased SUA concentration from reaching saturation levels at which uric acid crystals could trigger an acute organ injury. Most importantly, excipients in the formulation such as L-arginine, a basic amino acid and nitric oxide source, can increase the aqueous solubility of uric acid thereby also decreasing crystal formation associated with tumor lysis-like syndrome due to COVID-19 infections. L-arginine has been shown to protect against kidney injury, in the setting of ischemia reperfusion injury.

On October 8, 2020, we announced that we received a positive response from the FDA regarding our submission of a COVID-19 infection pre-investigational new drug ("pre-IND") meeting package providing the Company with a clear development path forward for XRx-101. Our submission to the FDA summarized current data supporting the XRx-101 program and we plan to rapidly advance into clinical trials. At the same time the FDA response provided clear feedback on the proposed plan and outlined the critical steps to test XRx-101 in patients with COVID-19 infection to treat AKI. The XRx-101 program is preparing for a pharmacokinetic study to describe the bioavailability of this unique formulation of xanthine oxidase inhibitor and characterize the oral dosing for our Phase 3 clinical trial to slow or reverse acute kidney disease in hospitalized individuals with COVID-19. Similarly, rapid decreased SUA concentration followed by sustained xanthine oxidase inhibition has the potential to improve cardiovascular and neurological outcomes as well. A number of completed clinical studies support regulatory filing of the XRx-101 program by XORTX. Oxypurinol is not yet approved for marketing anywhere in the world, though it has previously received FDA review under an NDA filing. We believe XRx-101 falls under the FDA 505(b)(2) developmental pathway supporting a reformulation of oxypurinol with increased bioavailability and superior tolerability compared to Allopurinol. We are pursuing a regulatory pathway pursuant to Section 505(b)(2) of the FDCA, and is considering pursuing the hybrid application of the EU Centralized Procedure pursuant to article 10(3) of Directive 2001/83/EC for the approval of XRx-101.

XRx-225

Overview

T2DN is a large unmet medical disease that is forecast to double in the next decades. T2DN affects the kidneys' ability to do their usual work of removing waste products and extra fluid from the body. Diabetic nephropathy affects approximately 12 million US citizens and an estimated 170 million individuals worldwide. Individuals with diabetes have been reported to develop kidney disease with a frequency of about 30-40%. Approximately half of all chronic kidney disease and kidney failure has been attributed to diabetic complications. Diabetic kidney disease is associated

with high blood pressure, insulin resistance, high uric acid levels, proteinuria, cardiovascular disease and decreasing filtering capacity of kidneys. Similarly, high SUA concentration has been reported to be an independent risk factor for progressing kidney disease in these patients, and is associated with increased blood pressure, systemic inflammation, cardiovascular injury, endothelial dysfunction and progressing kidney disease.

Over many years, the condition slowly damages the kidneys' filtering system, and can progress to kidney failure. ESRD, which occurs when kidneys are no longer capable of filtering blood to remove metabolic waste products and uric acid, is the final stage of chronic kidney disease, and can be fatal. At that stage, the treatment options are either dialysis (the mechanical filtering of blood), or a kidney transplant.

Current treatment of diseases

Major therapeutic interventions to treat T2DN include near-normal blood glucose control, antihypertensive treatment, and restriction of dietary proteins. Drug classes employed include hormones (such as insulin), sulfonylureas, biguanides, angiotensin-converting enzyme inhibitors, angiotensin receptor blockers, beta-adrenergic blocking agents, calcium channel blockers, and diuretics. However, many of the treatments above might not be effective in some patients with diabetes.

Potential Advantages of XRx-225

Recently we reported that lowering uric acid in individuals with T2DN could decrease proteinuria by approximately one-third, even in patients treated with the current standard of care. This finding is in agreement with other clinical trial reports of improved proteinuria, decreased creatinine, and decreased filtration rate of decline when uric acid is therapeutically decreased. Conceptually, lowering uric acid toward or into the normal range in T2DN would decrease harmful risk factors for kidney disease progression that may include decreased blood pressure, decreased endothelial dysfunction, decreased proteinuria, decreased inflammation and enhanced blood flow to the kidney. We believe XRx-225 will be a more effective and better therapy than current therapies.

Anticipated clinical development of XRx-225

XRx-225 is in non-clinical development stages. XORTX is in the process of manufacturing XRx-225 in preparation to proceed to animal testing, and then advancing to Phase 1 clinical testing.

Strategic Partnerships and Collaborations

On April 30, 2020, we announced the appointment of LONZA Group as manufacturer of GMP oxypurinol for the XRx-008 and XRx-101 clinical trial programs. The launch of oxypurinol manufacturing for both programs is the first step to advance toward clinical testing. Lonza is a leading global supplier to the pharmaceutical, biotech and specialty ingredients markets. Securing the manufacturing of oxypurinol and formulation in preparation for a bioequivalence study and the submission of the Investigational New Drug ("IND") package with the FDA are the main priorities to enable the pivotal Phase 3 clinical trial.

On August 4, 2020, the company announced a partnership with the Icahn School of Medicine at Mount Sinai, New York to study the incidence of AKI and hyperuricemia in patients hospitalized with COVID-19. This clinical study in more than 5,600 patients with COVID-19 builds upon unpublished observations from over 1,100 individuals, where greater than 60% of individuals with AKI had elevated uric acid levels above the normal range. This partnership is an investigator-led study focused on evaluation of the more than 5,600 individuals with COVID-19 infection. Dr. Steven Coca, lead investigator and Associate Professor of Medicine at the Icahn School of Medicine at Mount Sinai observed a hypercatabolic phenotype in a significant proportion of patients with AKI, manifested by extremely high serum uric acid levels, along with hyperkalemia and hyperphosphatemia without overt evidence of rhabdomyolysis. A better understanding of the pathophysiologic causes of COVID-associated AKI is needed, including the potential effect of hyperuricemia on the severity of kidney injury and contribution to poor outcomes. The company is advancing this investigator-led clinical study with Drs. Steven Coca and Jaime Uribarri and several other clinicians and investigators at the Icahn School of Medicine at Mount Sinai. This group is one of the leading medical networks in the world and the ability to expand on observations that hospitalized individuals with COVID-19 have very high uric acid level will provide clarity on the association of xanthine oxidase and uric acid acute kidney injury and multi-organ injury with infection.

Intellectual Property

Our business success will depend significantly on our ability to:

- secure, maintain and enforce patent and other proprietary protection for our core technologies, inventions and know-how;
- obtain and maintain licenses to key third-party intellectual property owned by such third parties;
- preserve the confidentiality of our trade secrets; and
- operate without infringing upon valid, enforceable third-party patents and other rights.

We seek to secure and maintain patent protection for the composition of matter, manufacturing processes and methods of use for our product and program candidates. We also utilize trade secrets, careful monitoring and limited disclosure of our proprietary information where patent protection is not appropriate. We also protect our proprietary information by ensuring that our employees, consultants, contractors and other advisors execute agreements requiring non-disclosure and assignment of inventions prior to their engagement. We will continue to expand our intellectual property holdings by seeking patent protection for new compositions of matter, new features and applications of our core therapeutic platforms, and innovative new therapeutic platforms, in the United States and other jurisdictions. We will also supplement internal innovation through in-licensing of new technologies and compositions of matter as appropriate. We intend to take advantage of any available data exclusivity, market exclusivity, patent term adjustment and patent term extensions.

We routinely monitor the status of existing and emerging intellectual property disclosed by third parties that may impact our business, and to the extent we identify any such disclosures, by evaluating them and taking appropriate courses of action.

As of May 21, 2021, our patent portfolio includes Xortx-owned and licensed patents and patent applications for five different active patent families.

Patent Family No.	Patent Family Name	XRx-101	XRx-008	XRx-225	Additional Potential Candidates
1	Xanthine Oxidase Inhibitor Formulation Patents – Kidney, Cardiovascular, Neurological	X	X	X	Other indications large and orphan
2	Virus, Coronavirus, Sepsis Health Consequences – Viral Induced Acute Organ, Kidney Injury	X			Generally applicable to viral infections, including respiratory and health consequences.
3	Methods of Enhancing Anti-Viral Therapies – Viral and Bacterial Infection	X			Generally applicable to Viral infections, including respiratory and health consequences
4	Compositions and Methods for Treatment and Prevention of Insulin Resistance			X	
5	Uric Acid Lowering Agents for Metabolic Syndrome (Treatment of Diabetic Nephropathy)			X	

Patent Family Member No. 1 is Xortx-owned and includes pending U.S. patent application and a granted European patent with the validation state selection in progress. Patent Family Member No. 2 is Xortx-owned includes a pending Patent Cooperation Treaty, or PCT, application. Xortx-owned Patent Family Member No. 3 includes a pending U.S. provisional patent application. These three families relate to our key product candidates and programs including XRx-101, XRx-008 and XRx-225 and our therapeutic platform technology, described elsewhere in this prospectus, and also for additional potential product candidates. Patent Family Member No. 4 includes an issued U.S. patent for which XORTX is the licensee. Patent Family Member No. 5 includes an issued U.S. patent and a pending European patent application, each of which Xortx is the licensee.

The Xortx owned and licensed patent family members include claims to cover AKI, and other acute organ injury due to COVID19 infection – a program which could ultimately be expanded to a larger patient population with unmet medical needs including other viral and sepsis patients. The value of patents for reformulation or repurposed drugs is additive as is the case of orphan programs given that FDA grant of orphan drug status would provide the Company with a seven-year marketing exclusivity in the U.S. which would be more than adequate to generate acceptable rewards, given the premium pricing environment available to rare disease opportunities. Notably, this exclusivity is 10 years in Europe and Japan.

Technology Licensing and In-Licensed Intellectual Property

We identify and selectively enter into technology licensing agreements and intellectual property in-licensing agreements to support pipeline advancement.

Manufacturing

We rely on third party contract manufacturing organizations to provide manufacturing for our products for our non-clinical and clinical studies. To retain focus on our expertise in developing new product candidates, we do not currently plan to develop or operate in-house manufacturing capacity. Our manufacturing candidates require standard manufacturing and chemistry manufacturing and control, or CMC, processes typical of those required for similar drug manufacturing. We therefore expect to continue to be able to develop product candidates that can be manufactured in a cost-effective fashion by our network of well-validated third party contract manufacturing organizations.

Through our contract manufacturing organizations, we are currently manufacturing a sufficient supply of our product candidates to carry out ongoing and planned preclinical and clinical studies. We plan to identify redundant suppliers and manufacturing prior to submission to the FDA.

Competition

The small molecule therapeutics industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our technology, knowledge, experience and scientific resources provide us with competitive advantages, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions and governmental agencies and public and private research institutions. Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future.

With respect to target discovery activities, competitors and other third parties, including academic and clinical researchers, may be able to access rare families and identify targets before we do.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaboration arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites, recruiting patients for clinical trials, and by acquiring technologies complementary to, or necessary for, our programs.

The key competitive factors affecting the success of all of our product candidates, if approved, are likely to be their efficacy, safety, convenience and price, the effectiveness of alternative products, the level of competition and the availability of coverage and adequate reimbursement from government and other third party payors.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products or therapies that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA, EMA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third party payors seeking to encourage the use of generic products.

Our product candidates will compete with the therapies and currently marketed drugs discussed below.

- *XRx-008*: XRx-008 is intended to treat patients with ADPKD. Currently, the only FDA approved ADPKD-targeted therapy is tolvaptan, which is marketed as Jynarque from Otsuka Pharmaceuticals Co., Ltd. We believe XRx-008 will be a more effective and better therapy because it is a potent oral uric acid lowering agent that does not require hospital administration and has a much superior safety profile with no adverse side effects reported to date.

- *XRx-101*: XRx-101 is intended to treat patients with COVID-19 who are at high risk of kidney failure. Currently, only one drug, Remdesvir, has been approved by the FDA for treatment of COVID-19. Additional drugs REGN-COV2, bamlanivimab, bamlanivimab combined with etesevimab, convaslescent plasma, and baricitinib, have been are authorized for COVID-19 treatment under the FDA EUA, and a

further two drugs, dexamethasone and tocilizumab, have been approved under the National Institute of Health Guidance. We believe XRx-101 will be a more effective and better therapy because it will be the first drug developed to treat patients with COVID-19 that are at a high risk of kidney failure, and because it will be both potent and safe.

- *XRx-225*: XRx-225 is intended to treat patients with T2DN. Currently approved therapeutic interventions to treat T2DN include near-normal blood glucose control, antihypertensive treatment, and restriction of dietary proteins. We believe XRx-225 will be a more effective and better therapy because it has been shown to be a powerful and safe uric acid lowering agent.

The FDA and corresponding regulatory authorities will ultimately review our clinical results and determine whether our product candidates are effective. No regulatory agency has made any such determination that any of our product candidates are effective for use by the general public for any indication.

Government Regulation

Government authorities in the United States, at the federal, state and local level, and in other countries extensively regulate, among other things, the research, development, testing, manufacturing, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of pharmaceutical products such as those we are developing. Our therapeutic candidates must be approved by the FDA through the New Drug Applications, or NDA, process before they may be legally marketed in the United States and will be subject to similar requirements in other countries prior to marketing in those countries. The process of obtaining regulatory approvals in the U.S. and in foreign countries and jurisdictions, and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations, require the expenditure of substantial time and financial resources.

U.S. Small Molecule Drug Product Development Process

In the United States, pharmaceutical products are subject to extensive regulation by the U.S. Food and Drug Administration, or FDA, pursuant to the Federal Food, Drug, and Cosmetic Act, or the FDCA. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending NDAs, warning letters, voluntary product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

The process required by the FDA before a small molecule drug product may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests, animal studies and formulation studies conducted according to good laboratory practices (GLPs) and other applicable regulations;

- submission to the FDA of an IND application, which must become effective before human clinical trials may begin;

- performance of adequate and well-controlled human clinical trials according to good clinical practices, (“GCPs”), to establish the safety and efficacy of the proposed product for its intended use;

- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the product is produced assess readiness for commercial manufacturing and conformance to the manufacturing-related elements of the application, to conduct a data integrity audit, and to assess compliance with current Good Manufacturing Practices, (“cGMP”) to assure that the facilities, methods and controls are adequate to preserve the product’s identity, strength, quality and purity; and

- FDA review and approval of the NDA.

Once a pharmaceutical candidate is identified for development, the product candidate enters the preclinical testing stage. Preclinical tests, also referred to as nonclinical studies, include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLPs.

The IND sponsor must submit the results of the preclinical tests, together with manufacturing information and analytical data to the FDA as part of the IND. Some nonclinical testing may continue even after the IND is submitted. In addition to including the results of the nonclinical studies, the IND will also include a protocol detailing, among other things, the objectives of the clinical trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated if the first phase lends itself to an efficacy determination. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA places the clinical study on a clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. The FDA may also impose clinical holds at any time during the life of an IND, due to safety concerns or non-compliance, and a clinical hold may affect one or more specific studies or all studies conducted under the IND. If the FDA imposes a clinical hold, trials may not recommence without FDA authorization and then only under terms authorized by the FDA.

Clinical trials involve the administration of the product candidate to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the study sponsor's control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical study, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety, including stopping rules that assure a clinical study will be stopped if certain adverse events should occur. Each protocol and any amendments to the protocol must be submitted to the FDA as part of the IND. Clinical trials must be conducted and monitored in accordance with the FDA's regulations comprising the GCP requirements, including the requirement that all research subjects provide informed consent. Further, each clinical study must be reviewed and approved by an independent institutional review board, or IRB, at or servicing each institution at which the clinical study will be conducted. An IRB is charged with protecting the welfare and rights of study participants and considers such items as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the form and content of the informed consent that must be signed by each clinical study subject or his or her legal representative and must monitor the clinical study until completed.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1. The product candidate is initially introduced into healthy human volunteers and tested for safety. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.

- Phase 2. The product candidate is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.

- Phase 3. Clinical trials are undertaken to further evaluate dosage, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical study sites. These clinical trials are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labelling.

Post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. In certain instances, FDA may mandate the performance of Phase 4 clinical trials. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow-up. The results of Phase 4 clinical trials can confirm the effectiveness of a product candidate and can provide important safety information. Conversely, the results of Phase 4 clinical trials can raise new safety or effectiveness issues that were not apparent during the original review of the product, which may result in product restrictions or even withdrawal of product approval.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical study investigators. Annual progress reports detailing the results of the clinical trials must be submitted to the FDA. Written IND safety reports must be promptly submitted to the FDA and the investigators for serious and unexpected adverse events, any findings from other trials, tests in laboratory animals or in vitro testing that suggest a significant risk for human subjects, or any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within

seven calendar days after the sponsor's initial receipt of the information. Human clinical trials are inherently uncertain and Phase 1, Phase 2 and Phase 3 testing may not be successfully completed. The FDA or the sponsor or its data safety monitoring board may suspend a clinical study at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical study at its institution if the clinical study is not being conducted in accordance with the IRB's requirements or if the biological product candidate has been associated with unexpected serious harm to patients.

There are also requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries. Sponsors of clinical trials of certain FDA-regulated products are required to register and disclose certain clinical trial information on a public registry maintained by the U.S. National Institutes of Health (NIH), which is publicly available at www.clinicaltrials.gov. Information related to the product, patient population, phase of investigation, study sites and investigators, and other aspects of the clinical trial is then made public as part of the registration. Although sponsors are also obligated to discuss the results of their clinical trials after completion, disclosure of the results of these trials may be delayed in some cases for up to two years after the date of completion of the trial. Failure to timely register a covered clinical study or to submit study results as provided for in the law can give rise to civil monetary penalties and also prevent the non-compliant party from receiving future grant funds from the federal government. The NIH's Final Rule on ClinicalTrials.gov registration and reporting requirements became effective in 2017, and both NIH and FDA have signaled the government's willingness to begin enforcing those requirements against non-compliant clinical trial sponsors.

Concurrent with clinical trials, companies usually complete additional animal trials and must also develop additional information about the physical characteristics of the biological product candidate as well as finalize a process for manufacturing the product in commercial quantities in accordance with GMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

U.S. Review and Approval Process

Assuming successful completion of the required clinical testing, the results of the preclinical studies and clinical trials, along with detailed descriptions of the product's chemistry, manufacturing, and controls, proposed labeling and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the product. The cost of preparing and submitting an NDA is substantial. Under federal law, the submission of most NDAs is additionally subject to a substantial application user fee, currently over $2.8 million for an NDA with clinical information, and the manufacturer and/or sponsor under an approved NDA is also subject to an annual program fee, currently over $330,000. These fees are typically increased annually. Fee waivers or reductions are available in certain circumstances.

Section 505(b)(1) and Section 505(b)(2) of the FDCA are the provisions governing the type of NDAs that may be submitted under the FDCA. Section 505(b)(1) is the traditional pathway for new chemical entities when no other new drug containing the same active pharmaceutical ingredient or active moiety, which is the molecule or ion responsible for the action of the drug substance, has been approved by the FDA. As an alternate pathway to FDA approval for new or improved formulations of previously approved products, a company may file a Section 505(b)(2) NDA. Section 505(b)(2) permits the submission of an NDA where at least some of the information required for approval comes from studies not conducted by or for the applicant and for which the applicant has not obtained a right of reference.

The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of NDAs. The FDA seeks to review applications for standard review drug products within ten months, and applications for priority review drugs within six months. Priority review can be applied to drugs intended to treat a serious condition and that the FDA determines offer major advances in treatment, or provide a treatment where no adequate therapy exists. The review process for both standard and priority reviews may be extended by FDA for three additional months to consider additional, late-submitted information, or information intended to clarify information already provided in the submission in response to FDA review questions.

As part of the NDA review process, the FDA likely will re-analyze the clinical trial data, which could result in extensive discussions between the FDA and the applicant. The FDA may also refer applications for novel drug

products, or drug products that present difficult questions of safety or efficacy, to an external advisory committee, which is typically a panel that includes clinicians and other experts, for review, evaluation, and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA will typically inspect one or more clinical sites to assure compliance with GCPs and the IND protocol requirements and to assure the integrity of the clinical data submitted to the FDA. Additionally, the FDA will typically inspect the facility or the facilities at which the drug is manufactured, unless the facility has recently had an FDA inspection. The FDA also typically inspects the application sponsor. The FDA will not approve the product unless compliance with current good manufacturing practice, or cGMP, requirements is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied. To ensure cGMP and GCP compliance by its employees and third-party contractors, an applicant must incur significant expenditure of time, money and effort in the areas of training, record keeping, production and quality control.

After the FDA evaluates the NDA and the manufacturing facilities, it issues either an approval letter or a complete response letter. The approval process is lengthy and often difficult, and notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the NDA does not satisfy its regulatory criteria for approval and deny approval or may require additional clinical or other data and information. If the agency decides not to approve a NDA, the FDA will issue a complete response letter, or CRL, that describes all of the specific deficiencies in the NDA identified by the FDA. A CRL indicates that the review cycle of the application is complete and the application will not be approved in its present form. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the CRL may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the NDA, addressing all of the deficiencies identified in the letter, or withdraw the application. If, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter to the applicant. The FDA has committed to reviewing such resubmissions in response to an issued CRL in either two or six months depending on the type of information included. Even with the submission of this additional information, however, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

An approval letter authorizes commercial marketing of the drug product with the accompanying approved prescribing information for specific indications. Even if a product receives regulatory approval, the approval may be limited to specific indications and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. The FDA also may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a risk evaluation and mitigation strategy, or REMS, plan in addition to the approved labeling, to help ensure that the benefits of the drug outweigh its risks. A REMS could include communication plans for healthcare professionals, medication guides for patients, and/or elements to assure safe use, or ETASU. ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, restricted distribution requirements, dispensing only under certain circumstances, special monitoring, and the use of patient registries. The FDA determines the requirement for a REMS, as well as the specific REMS provisions, on a case-by-case basis. If the FDA concludes a REMS plan is needed, the sponsor of the NDA must submit a proposed REMS plan. The requirement for a REMS can materially affect the potential market and profitability of the drug. Moreover, product approval may require substantial post-approval testing and surveillance to monitor the drug's safety or efficacy as described as post marketing commitments or requirements included in the approval letter. Once granted, product approvals may be withdrawn if compliance with regulatory requirements and commitments is not maintained or problems are identified following initial marketing. Moreover, after approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further testing requirements and FDA review and approval.

Hatch-Waxman Act and New Drug Marketing Exclusivity

Under the Drug Price Competition and Patent Term Restoration Act of 1984, otherwise known as the Hatch-Waxman Amendments to the FDCA, Congress authorized the FDA to approve generic drugs that are the same as drugs previously approved by the FDA under the NDA provisions of the statute and also enacted Section 505(b)(2) of the FDCA. To obtain approval of a generic drug, an applicant must submit an abbreviated new drug application, or ANDA, to the agency. In support of such applications, a generic manufacturer may rely on the preclinical and clinical testing conducted for a drug product previously approved under an NDA, known as the reference listed drug.

Specifically, in order for an ANDA to be approved, the FDA must find that the generic version is identical to the Listed Drug with respect to the active ingredients, the route of administration, the dosage form, and the strength of the drug. In contrast, Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies not conducted by or for the applicant and for which the applicant has not obtained a right of reference. A Section 505(b)(2) applicant may eliminate the need to conduct certain preclinical or clinical studies, if it can establish that reliance on studies conducted for a previously-approved product is scientifically appropriate. Unlike the ANDA pathway used by developers of bioequivalent versions of innovator drugs, which does not allow applicants to submit new clinical data other than bioavailability or bioequivalence data, the 505(b)(2) regulatory pathway does not preclude the possibility that a follow-on applicant would need to conduct additional clinical trials or nonclinical studies; for example, they may be seeking approval to market a previously approved drug for new indications or for a new patient population that would require new clinical data to demonstrate safety or effectiveness. The FDA may then approve the new product for all or some of the label indications for which the Listed Drug has been approved, or for any new indication sought by the Section 505(b)(2) applicant, as applicable.

Upon approval of an NDA or a supplement thereto, NDA sponsors are required to list with the FDA each patent with claims that cover the applicant's product or an approved method of using the product. Each of the patents listed by the NDA sponsor is published in the Orange Book. When an ANDA applicant submits its application to the FDA, the applicant is required to certify to the FDA concerning any patents listed in the Orange Book for the Listed Drug, except for patents covering methods of use for which the follow-on applicant is not seeking approval. To the extent the Section 505(b)(2) applicant is relying on studies conducted for an already approved product, such an applicant is also required to certify to the FDA concerning any patents listed for the approved product in the Orange Book to the same extent that an ANDA applicant would.

Specifically, an ANDA or 505(b)(2) applicant for a follow-on drug product with respect to each patent that: (i) the required patent information has not been filed by the original applicant; (ii) the listed patent already has expired; (iii) the listed patent has not expired, but will expire on a specified date and approval is sought after patent expiration; or (iv) the listed patent is invalid, unenforceable or will not be infringed by the manufacture, use or sale of the new product.

If a Paragraph I or II certification is filed, the FDA may make approval of the application effective immediately upon completion of its review. If a Paragraph III certification is filed, the approval may be made effective on the patent expiration date specified in the application, although a tentative approval may be issued before that time. If an application contains a Paragraph IV certification, a series of events will be triggered, the outcome of which will determine the effective date of approval of the ANDA or 505(b)(2) application.

A certification that the new product will not infringe the Listed Drug's listed patents or that such patents are invalid is called a Paragraph IV certification. If the follow-on applicant has provided a Paragraph IV certification to the FDA, the applicant must also send notice of the Paragraph IV certification to the NDA and patent holders for the Listed Drug once the applicant's NDA has been accepted for filing by the FDA. The NDA and patent holders may then initiate a legal challenge to the Paragraph IV certification. The filing of a patent infringement lawsuit within 45 days of their receipt of a Paragraph IV certification automatically prevents the FDA from approving the ANDA or 505(b)(2) NDA until the earlier of 30 months after the receipt of the Paragraph IV notice, expiration of the patent or a decision in the infringement case that is favorable to the ANDA or 505(b)(2) applicant. Alternatively, if the listed patent holder does not file a patent infringement lawsuit within the required 45-day period, the follow-on applicant's ANDA or 505(b)(2) NDA will not be subject to the 30-month stay.

In addition, under the Hatch-Waxman Amendments, the FDA may not approve an ANDA or 505(b)(2) NDA until any applicable period of non-patent exclusivity for the referenced Listed Drug has expired. These market exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to gain approval of a NDA for a drug containing a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an ANDA or a 505(b)(2) NDA submitted by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement.

The FDCA also provides three years of marketing exclusivity for a NDA, 505(b)(2) NDA or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example, new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the conditions of use associated with the new clinical investigations and does not prohibit the FDA from approving follow-on applications for drugs containing the original active agent. Five-year and three-year exclusivity also will not delay the submission or approval of a traditional NDA filed under Section 505(b)(1) of the FDCA. However, an applicant submitting a traditional NDA would be required to either conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Patent Term Extension

After NDA approval, owners of relevant drug patents may apply for up to a five-year patent term extension. The allowable patent term extension is calculated as half of the drug's testing phase – the time between when the IND becomes effective and NDA submission – and all of the review phase – the time between NDA submission and approval, up to a maximum of five years. The time can be shortened if FDA determines that the applicant did not pursue approval with due diligence. The total patent term after the extension may not exceed 14 years. For patents that might expire during the application phase, the patent owner may request an interim patent extension. An interim patent extension increases the patent term by one year and may be renewed up to four times. For each interim patent extension granted, the post-approval patent extension is reduced by one year. The director of the Patent and Trademark Office (PTO) must determine that approval of the drug covered by the patent for which a patent extension is being sought is likely. Interim patent extensions are not available for a drug for which an NDA has not been submitted.

Pediatric Clinical Trials and Exclusivity

Under the Pediatric Research Equity Act, or PREA, NDAs or certain types of supplements to NDAs must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug is safe and effective. The sponsor must submit an initial Pediatric Study Plan, or PSP, within 60 days of an end-of-phase 2 meeting or as may be agreed between the sponsor and the FDA. The initial PSP must include an outline of the pediatric study or studies that the sponsor plans to conduct, including study objectives and design, age groups, relevant endpoints and statistical approach, or a justification for not including such detailed information, and any request for a deferral of pediatric assessments or a full or partial waiver of the requirement to provide data from pediatric studies along with supporting information. The FDA and the sponsor must reach agreement on the PSP. A sponsor can submit amendments to an agreed-upon initial PSP at any time if changes to the pediatric plan need to be considered based on data collected from nonclinical studies, early phase clinical trials, and/or other clinical development programs. The FDA may grant full or partial waivers, or deferrals, for submission of pediatric assessment data.

The Best Pharmaceuticals for Children Act, or BPCA, provides NDA holders a six-month extension of any exclusivity – patent or non-patent – for a drug if certain conditions are met, including satisfaction of a pediatric trial(s) agreed with FDA as a Pediatric Written Request. Conditions for pediatric exclusivity include the FDA's determination that information relating to the use of a new drug in the pediatric population may produce health benefits in that population, the FDA making a written request for pediatric clinical trials, and the applicant agreeing to perform, and reporting on, the requested clinical trials within the statutory timeframe. This six-month exclusivity may be granted if an NDA sponsor submits pediatric data that fairly respond to the written request from the FDA for such data. Those data do not need to show the product to be effective in the pediatric population studied; rather, if the clinical trial is deemed to fairly respond to the FDA's request, the additional protection is granted. Although this is not a patent term extension, it effectively extends the regulatory period during which the FDA cannot approve another application.

Orphan Drug Designation and Orphan Product Exclusivity

Under the Orphan Drug Act, the FDA may grant Orphan Drug Designation to a drug candidate intended to treat a rare disease or condition, which is generally a disease or condition that affects (i) fewer than 200,000 individuals in the United States, or (ii) more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and marketing the product for this type of disease or condition will be recovered from sales in the United States. Orphan Drug Designation must be requested before submitting an NDA. After the FDA grants Orphan Drug Designation, the identity of the therapeutic agent and its potential orphan use are disclosed

publicly by the FDA. Orphan Drug Designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

In the United States, Orphan Drug Designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. In addition, if a product candidate that has Orphan Drug Designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means the FDA may not approve any other application to market the same product for the same indication for a period of seven years, except in limited circumstances, such as a showing of clinical superiority over the product with orphan exclusivity or where the manufacturer with orphan exclusivity is unable to assure sufficient quantities of the approved orphan designated product. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity. Orphan product exclusivity also could block the approval of one of our product candidates for seven years if a competitor obtains approval of the same drug as defined by the FDA or if our product candidate is determined to be contained within the competitor's approved product for the same indication or disease. If a drug or biological product designated as an orphan product receives marketing approval for an indication broader than what was previously designated, it may not be entitled to orphan product exclusivity.

Expedited Development and Review Programs

The FDA is authorized to designate certain products for expedited development or review if they are intended to address an unmet medical need in the treatment of a serious or life-threatening disease or condition. These programs include fast track designation, breakthrough therapy designation, and priority review designation. Generally, drugs that may be eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs, and those that offer meaningful benefits over existing treatments.

To be eligible for a fast track designation, the FDA must determine, based on the request of a sponsor, that a product is intended to treat a serious or life-threatening disease or condition and demonstrates the potential to address an unmet medical need by providing a therapy where none exists or a therapy that may be potentially superior to existing therapy based on efficacy or safety factors. Fast track designation provides opportunities for more frequent interactions with the FDA review team to expedite development and review of the product. The FDA may also review sections of the NDA for a fast track product on a rolling basis before the complete application is submitted, if the sponsor and the FDA agree on a schedule for the submission of the application sections, and the sponsor pays any required user fees upon submission of the first section of the NDA. In addition, fast track designation may be withdrawn by the sponsor or rescinded by the FDA if the designation is no longer supported by data emerging in the clinical trial process.

In addition the FDA may designate a product for priority review if it is a drug that treats a serious condition and, if approved, would provide a significant improvement in safety or effectiveness. The FDA determines at the time that the NDA is submitted, on a case-by-case basis, whether the proposed drug represents a significant improvement in treatment, prevention or diagnosis of disease when compared with other available therapies. Significant improvement may be illustrated by evidence of increased effectiveness in the treatment of a condition, elimination or substantial reduction of a treatment-limiting drug reaction, documented enhancement of patient compliance that may lead to improvement in serious outcomes, or evidence of safety and effectiveness in a new subpopulation. A priority review designation is intended to direct overall attention and resources to the evaluation of such applications, and to shorten the FDA's goal for taking action on an original marketing application from ten months to six months.

Congress also created a new regulatory program in 2012 for therapeutic product candidates designated by FDA as "breakthrough therapies" upon a request made by the IND sponsor. A drug may be eligible for designation as a breakthrough therapy if the product is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening condition and preliminary clinical evidence indicates that the product may demonstrate substantial improvement over currently approved therapies on one or more clinically significant endpoints. The benefits of breakthrough therapy designation include the same benefits as fast track designation, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product, including involvement of senior managers. Drugs designated as breakthrough therapies are also eligible for accelerated approval of their future marketing applications. The FDA must take certain actions with respect to breakthrough therapies, such as holding timely meetings with and providing advice to the product sponsor, intended to expedite the development and review of an application for approval of a breakthrough therapy.

Fast track designation, priority review, and breakthrough therapy designation do not change the standards for approval and may not ultimately expedite the development or approval process. Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Accelerated Approval

A product candidate may also be eligible for accelerated approval if it treats a serious or life-threatening condition and generally provides a meaningful advantage over available therapies. Accelerated approval allows the FDA to approve the product on the basis of adequate and well-controlled clinical trials establishing that the drug product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit. A surrogate endpoint is a laboratory measurement or physical sign used as an indirect or substitute measurement representing a clinically meaningful outcome. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. The FDA may also grant accelerated approval for such a drug when the product has an effect on an intermediate clinical endpoint that can be measured earlier than an effect on irreversible morbidity or mortality, or IMM, and that is reasonably likely to predict an effect on IMM or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. The FDA has limited experience with accelerated approvals based on intermediate clinical endpoints, but has indicated that such endpoints generally may support accelerated approval when the therapeutic effect measured by the endpoint is not itself a clinical benefit and basis for traditional approval, if there is a basis for concluding that the therapeutic effect is reasonably likely to predict the ultimate long-term clinical benefit of a drug.

Discussions with the FDA about the feasibility of an accelerated approval typically begin early in the development of the drug in order to identify, among other things, an appropriate endpoint. The accelerated approval pathway is most often used in settings in which the course of a disease is long and an extended period of time is required to measure the intended clinical benefit of a drug, even if the effect on the surrogate or intermediate clinical endpoint occurs rapidly. For example, accelerated approval has been used extensively in the development and approval of drugs for treatment of a variety of cancers in which the goal of therapy is generally to improve survival or decrease morbidity and the duration of the typical disease course requires lengthy and sometimes large clinical trials to demonstrate a clinical or survival benefit.

As a condition of approval, the FDA generally requires that a sponsor of a drug receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials to verify and describe the anticipated effect on IMM or other clinical endpoints. Drugs granted accelerated approval must meet the same statutory standards for safety and effectiveness as those granted traditional approval. Because the accelerated approval pathway is usually contingent on a sponsor's agreement to conduct, in a diligent manner, additional post-approval confirmatory studies to verify and describe the drug's clinical benefit, a product candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval studies, or to confirm the predicted clinical benefit of the product during post-marketing studies, would allow the FDA to withdraw approval of the drug. In addition, all promotional materials for product candidates being considered and approved under the accelerated approval program are subject to prior review by the FDA.

Post-Approval Requirements

Following approval of a new product, the manufacturer and the approved drug product are subject to pervasive and continuing regulation by the FDA, including, among other things, monitoring and record-keeping activities, reporting of adverse experiences with the product, product sampling and distribution restrictions, complying with promotion and advertising requirements, which include restrictions on promoting drugs for unapproved uses or patient populations (i.e., "off-label use") and limitations on industry-sponsored scientific and educational activities. Although physicians may prescribe legally available products for off-label uses, manufacturers may not market or promote such uses. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability, including adverse publicity, enforcement action by the FDA, corrective advertising, consent decrees and the full range of civil and criminal penalties available to the FDA. Prescription drug promotional materials also must be submitted to the FDA in conjunction with their first use. Further, if there are any modifications to the approved drug product, including changes in indications, labeling or manufacturing processes or facilities, the applicant may be required to

submit and obtain FDA approval of a new NDA or NDA supplement, which may require the applicant to develop additional data or conduct additional preclinical studies or clinical trials.

FDA regulations require that products be manufactured in specific approved facilities and in accordance with cGMPs. The cGMP regulations include requirements relating to organization of personnel, buildings and facilities, equipment, control of components and drug product containers and closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls, records and reports and returned or salvaged products. The manufacturing facilities for our product candidates must meet cGMP requirements and satisfy the FDA or comparable foreign regulatory authorities' satisfaction before any product is approved and our commercial products can be manufactured. These manufacturers must comply with cGMPs that require, among other things, quality control and quality assurance, the maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. Manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP requirements and other laws. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance. The discovery of violative conditions, including failure to conform to cGMPs, could result in enforcement actions, and the discovery of problems with a product after approval may result in restrictions on a product, manufacturer or holder of an approved NDA, including recall.

Once an approval of a prescription drug is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in mandatory revisions to the approved labeling to add new safety information; imposition of post-market or clinical trials to assess new safety risks; or imposition of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or other enforcement-related letters or clinical holds on post-approval clinical trials;
- refusal of the FDA to approve pending NDAs or supplements to approved NDAs, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- injunctions or the imposition of civil or criminal penalties;
- consent decrees, corporate integrity agreements, debarment, or exclusion from federal healthcare programs; and
- mandated modification of promotional materials and labeling and the issuance of corrective information.

In addition, the distribution of prescription pharmaceutical products is subject to the Prescription Drug Marketing Act (PDMA), which regulates the distribution of drugs and drug samples at the federal level, and sets minimum standards for the registration and regulation of drug distributors by the states. Both the PDMA and state laws limit the distribution of prescription pharmaceutical product samples and impose requirements to ensure accountability in distribution. Most recently, the Drug Supply Chain Security Act (DSCSA), was enacted with the aim of building an electronic system to identify and trace certain prescription drugs distributed in the United States. The DSCSA mandates phased-in and resource-intensive obligations for pharmaceutical manufacturers, wholesale distributors, and dispensers over a 10-year period that is expected to culminate in November 2023. From time to time, new legislation and regulations may be implemented that could significantly change the statutory provisions governing the approval, manufacturing and marketing of prescription drug products regulated by the FDA. It is impossible to predict whether further legislative or regulatory changes will be enacted, or FDA regulations, guidance or interpretations changed or what the impact of such changes, if any, may be.

Additional Regulation

In addition to the foregoing, provincial, state and federal U.S. laws regarding environmental protection and hazardous substances affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

Anti-Corruption Laws

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, the Canadian Corruption of Foreign Public Officials Act and possibly other state and national anti-bribery and anti-money laundering laws in countries in which we conduct activities, such as the UK Bribery Act 2010 and the UK Proceeds of Crime Act 2002, collectively, Anti-Corruption Laws. Among other matters, such Anti-Corruption Laws prohibit corporations and individuals from directly or indirectly paying, offering to pay or authorizing the payment of money or anything of value to any foreign government official, government staff member, political party or political candidate, or certain other persons, in order to obtain, retain or direct business, regulatory approvals or some other advantage in an improper manner. We can also be held liable for the acts of our third party agents (including CROs) under the FCPA, the Canadian Corruption of Foreign Public Officials Act, the UK Bribery Act 2010 and possibly other Anti-Corruption Laws. In the healthcare sector, anti-corruption risk can also arise in the context of improper interactions with doctors, key opinion leaders, and other healthcare professionals who work for state-affiliated hospitals, research institutions, or other organizations.

Data Privacy and the Protection of Personal Information

We are subject to laws and regulations governing data privacy and the protection of personal information including health information. The legislative and regulatory landscape for privacy and data protection continues to evolve, and there has been an increasing focus on privacy and data protection issues which will continue to affect our business. In the United States, we may be subject to state security breach notification laws, state laws protecting the privacy of health and personal information and federal and state consumer protections laws which regulate the collection, use, disclosure and transmission of personal information. These laws overlap and often conflict and each of these laws is subject to varying interpretations by courts and government agencies, creating complex compliance issues for us. If we fail to comply with applicable laws and regulations we could be subject to penalties or sanctions, including criminal penalties. Our future customers and research partners must comply with laws governing the privacy and security of health information, including the Health Insurance Portability and Accountability Act of 1996 as amended ("HIPAA") and state health information privacy laws. If we knowingly obtain health information that is protected under HIPAA, called "protected health information," our customers or research collaborators may be subject to enforcement and we may have direct liability for the unlawful receipt of protected health information or for aiding and abetting a HIPAA violation.

State laws protecting health and personal information are becoming increasingly stringent. For example, California has implemented the California Confidentiality of Medical Information Act that imposes restrictive requirements regulating the use and disclosure of health information and other personally identifiable information, and California has recently adopted the California Consumer Privacy Act of 2018 ("CCPA"). The CCPA mirrors a number of the key provisions of the EU General Data Protection Regulation ("GDPR"). The CCPA establishes a new privacy framework for covered businesses by creating an expanded definition of personal information, establishing new data privacy rights for consumers in the State of California, imposing special rules on the collection of consumer data from minors, and creating a new and potentially severe statutory damages framework for violations of the CCPA and for businesses that fail to implement reasonable security procedures and practices to prevent data breaches. Additionally, a new privacy law, the California Privacy Rights Act ("CPRA"), was approved by California voters in the election on November 3, 2020. The CPRA will modify the CCPA significantly, potentially resulting in further uncertainty, additional costs and expenses in an effort to comply and additional potential for harm and liability for failure to comply. Other states in the U.S. are considering privacy laws similar to CCPA, with Virginia enacting its own such law in early 2021.

Government Regulation Outside of the United States

In addition to regulations in the United States, we are a Canadian registered company and subject to Canadian law, similarly partnering or co-development agreements within the year could substantially alter what jurisdictions and government regulations the company is subject to and will be subject, either directly or through our distribution partners, to a variety of regulations in other jurisdictions governing, among other things, clinical trials, the privacy of personal data and commercial sales and distribution of our products, if approved.

Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in non-U.S. countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a process that requires the submission of a clinical trial application much like an IND prior to the commencement of human clinical trials. In Europe, for example, a clinical trial application, or CTA, must be submitted to the competent national health authority and to independent ethics committees in each country in which a company plans to conduct clinical trials. Once the CTA is approved in accordance with a country's requirements, clinical trials may proceed in that country.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country, even though there is already some degree of legal harmonization in the European Union member states resulting from the national implementation of underlying E.U. legislation. In all cases, the clinical trials are conducted in accordance with GCP and other applicable regulatory requirements.

To obtain a marketing license for a new drug, or medicinal product in the European Union, the sponsor must obtain approval of a marketing authorization application, or MAA. The way in which a medicinal product can be approved in the European Union depends on the nature of the medicinal product.

The centralized procedure results in a single marketing authorization granted by the European Commission that is valid across the European Union, as well as in Iceland, Liechtenstein, and Norway. The centralized procedure is compulsory for human drugs that are: (i) derived from biotechnology processes, such as genetic engineering, (ii) contain a new active substance indicated for the treatment of certain diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative diseases, autoimmune and other immune dysfunctions and viral diseases, (iii) officially designated "orphan drugs" (drugs used for rare human diseases) and (iv) advanced-therapy medicines, such as gene-therapy, somatic cell-therapy or tissue-engineered medicines. The centralized procedure may at the request of the applicant also be used for human drugs which do not fall within the above mentioned categories if the human drug (a) contains a new active substance which was not authorized in the European Community; or (b) the applicant shows that the medicinal product constitutes a significant therapeutic, scientific or technical innovation or that the granting of authorization in the centralized procedure is in the interests of patients or animal health at the European Community level.

Under the centralized procedure in the European Union, the maximum timeframe for the evaluation of a marketing authorization application by the European Medicines Agency, or EMA, is 210 days (excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the Committee for Medicinal Products for Human Use, or CHMP), with adoption of the actual marketing authorization by the European Commission thereafter. Accelerated evaluation might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest from the point of view of therapeutic innovation, defined by three cumulative criteria: the seriousness of the disease to be treated; the absence of an appropriate alternative therapeutic approach, and anticipation of exceptional high therapeutic benefit. In this circumstance, EMA ensures that the evaluation for the opinion of the CHMP is completed within 150 days and the opinion issued thereafter.

The mutual recognition procedure, or MRP, for the approval of human drugs is an alternative approach to facilitate individual national marketing authorizations within the European Union. Basically, the MRP may be applied for all human drugs for which the centralized procedure is not obligatory. The MRP is applicable to the majority of conventional medicinal products, and is based on the principle of recognition of an already existing national marketing authorization by one or more member states. In the MRP, a marketing authorization for a drug already exists in one or more member states of the EU and subsequently marketing authorization applications are made in other European Union member states by referring to the initial marketing authorization. The member state in which the marketing authorization was first granted will then act as the reference member state. The member states where the marketing authorization is subsequently applied for act as concerned member states. After a product assessment is completed by the reference member state, copies of the report are sent to all member states, together with the approved summary of product characteristics, labeling and package leaflet. The concerned member states then have 90 days

to recognize the decision of the reference member state and the summary of product characteristics, labeling and package leaflet. National marketing authorizations within individual member states shall be granted within 30 days after acknowledgement of the agreement

Should any member state refuse to recognize the marketing authorization by the reference member state, on the grounds of potential serious risk to public health, the issue will be referred to a coordination group. Within a timeframe of 60 days, member states shall, within the coordination group, make all efforts to reach a consensus. If this fails, the procedure is submitted to an EMA scientific committee for arbitration. The opinion of this EMA committee is then forwarded to the Commission, for the start of the decision-making process. As in the centralized procedure, this process entails consulting various European Commission Directorates General and the Standing Committee on Human Medicinal Products or Veterinary Medicinal Products, as appropriate.

For countries outside of the European Union, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials are conducted in accordance with GCP and the other applicable regulatory requirements.

If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension of clinical trials, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions, and criminal prosecution.

Europe - Data Privacy

On May 25, 2018, the European General Data Protection Regulation, or GDPR, went into effect, implementing a broad data protection framework that expanded the scope of EU data protection law, including to non-EU entities that process, or control the processing of, personal data relating to individuals located in the EU, including clinical trial data. The GDPR sets out a number of requirements that must be complied with when handling the personal data of European Union-based data subjects including: providing expanded disclosures about how their personal data will be used; higher standards for organizations to demonstrate that they have obtained valid consent or have another legal basis in place to justify their data processing activities; the obligation to appoint data protection officers in certain circumstances; new rights for individuals to be "forgotten" and rights to data portability, as well as enhanced current rights (e.g. access requests); the principal of accountability and demonstrating compliance through policies, procedures, training and audit; and a new mandatory data breach regime. In particular, medical or health data, genetic data and biometric data where the latter is used to uniquely identify an individual are all classified as "special category" data under the GDPR and afforded greater protection and require additional compliance obligations. Further, EU member states have a broad right to impose additional conditions—including restrictions—on these data categories. This is because the GDPR allows EU member states to derogate from the requirements of the GDPR mainly in regard to specific processing situations (including special category data and processing for scientific or statistical purposes). As the EU states continue to reframe their national legislation to harmonize with the GDPR, we will need to monitor compliance with all relevant EU member states' laws and regulations, including where permitted derogations from the GDPR are introduced.

We will also be subject to evolving EU laws on data export, if we transfer data outside the EU to ourselves or third parties outside of the EU. The GDPR only permits exports of data outside the EU where there is a suitable data transfer solution in place to safeguard personal data (e.g. the European Union Commission approved Standard Contractual Clauses). On July 16, 2020, the Court of Justice of the European Union or the CJEU, issued an opinion in the case *Maximilian Schrems vs. Facebook* (Case C-311/18), called *Schrems II.* This decision calls into question certain data transfer mechanisms as between the EU member states and the US. The CJEU is the highest court in Europe and the *Schrems II* decision heightens the burden on data importers to assess U.S. national security laws on their business and future actions of EU data protection authorities are difficult to predict. Consequently, there is some risk of any data transfers from the European Union being halted. If we have to rely on third parties to carry out services for us, including processing personal data on our behalf, we are required under GDPR to enter into contractual arrangements to help ensure that these third parties only process such data according to our instructions and have sufficient security measures in place. Any security breach or non-compliance with our contractual terms or breach of applicable law by such third parties could result in enforcement actions, litigation, fines and penalties or adverse publicity and could cause customers to lose trust in us, which would have an adverse impact on our reputation and business. Any contractual arrangements requiring the transfer of personal data from the EU to us in the United

States will require greater scrutiny and assessments as required under *Schrems II* and may have an adverse impact on cross-border transfers of personal data, or increase costs of compliance. The GDPR provides an enforcement authority to impose large penalties for noncompliance, including the potential for fines of up to €20 million or 4% of the annual global revenues of the noncompliant company, whichever is greater. We will be subject to the GDPR when we have a European Union presence or "establishment" (e.g., EU based subsidiary or operations), when conducting clinical trials with EU based data subjects, whether the trials are conducted directly by us or through a vendor or partner, or offering approved products or services to EU-based data subjects, regardless of whether involving a EU based subsidiary or operations.

Pharmaceutical Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we may obtain regulatory approval. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the availability of coverage and adequate reimbursement from third-party payors. Third-party payors include government programs such as Medicare or Medicaid, managed care plans, private health insurers, and other organizations. These third-party payors may deny coverage or reimbursement for a product or therapy in whole or in part if they determine that the product or therapy was not medically appropriate or necessary. Third-party payors may attempt to control costs by limiting coverage to specific drug products on an approved list, or formulary, which might not include all of the FDA-approved drug products for a particular indication, and by limiting the amount of reimbursement for particular procedures or drug treatments. Additionally, coverage and reimbursement for drug products can differ significantly from payor to payor. The Medicare and Medicaid programs are often used as models by private payors and other governmental payors to develop their coverage and reimbursement policies for drugs. However, one third-party payor's decision to cover a particular drug product does not ensure that other payors will also provide coverage for the product, or will provide coverage at an adequate reimbursement rate.

The cost of pharmaceuticals continues to generate substantial governmental and third party payor interest. We expect that the pharmaceutical industry will experience pricing pressures due to the trend toward managed healthcare, the increasing influence of managed care organizations and additional legislative proposals. Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products to obtain third-party payor coverage, in addition to the costs required to obtain any FDA marketing approvals. Our product candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

Some third-party payors also require pre-approval of coverage for new or innovative drug therapies before they will reimburse healthcare providers who use such therapies. While we cannot predict whether any proposed cost-containment measures will be adopted or otherwise implemented in the future, these requirements or any announcement or adoption of such proposals could have a material adverse effect on our ability to obtain adequate prices for our product candidates and to operate profitably.

In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. There can be no assurance that our products will be considered medically reasonable and necessary for a specific indication, that our products will be considered cost-effective by third-party payors, that coverage or an adequate level of reimbursement will be available or that third-party payors' reimbursement policies will not adversely affect our ability to sell our products profitably.

Healthcare Reform and Potential Changes to Healthcare Laws

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our future products profitably. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. The FDA's and other regulatory authorities' policies may

change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we otherwise may have obtained and we may not achieve or sustain profitability, which would adversely affect our business, prospects, financial condition and results of operations. Moreover, among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access.

By way of example, Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the PPACA, was enacted in March 2010 and has had a significant impact on the healthcare industry in the U.S. The ACA expanded coverage for the uninsured while at the same time containing overall healthcare costs. With regard to biopharmaceutical products, the PPACA, among other things, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, established annual fees on manufacturers of certain branded prescription drugs, and created a new Medicare Part D coverage gap discount program. Additionally, in December 2019, President Trump signed the Further Consolidated Appropriations Act for 2020 into law (P.L. 116-94) that includes a piece of bipartisan legislation called the Creating and Restoring Equal Access to Equivalent Samples Act of 2019 or the "CREATES Act." The CREATES Act aims to address the concern articulated by both the FDA and others in the industry that some brand manufacturers have improperly restricted the distribution of their products, including by invoking the existence of a REMS for certain products, to deny generic product developers access to samples of brand products. Because generic product developers need samples to conduct certain comparative testing required by the FDA, some have attributed the inability to timely obtain samples as a cause of delay in the entry of generic products. To remedy this concern, the CREATES Act establishes a private cause of action that permits a generic product developer to sue the brand manufacturer to compel it to furnish the necessary samples on "commercially reasonable, market-based terms." Whether and how generic product developments will use this new pathway, as well as the likely outcome of any legal challenges to provisions of the CREATES Act, remain highly uncertain and its potential effects on competition in the U.S. biopharmaceutical marketplace.

As another example, the 2021 Consolidated Appropriations Act signed into law on December 27, 2020 incorporated extensive healthcare provisions and amendments to existing laws, including a requirement that all manufacturers of drugs and biological products covered under Medicare Part B report the product's average sales price, or ASP, to the Department of Health and Human Services ("DHHS") beginning on January 1, 2022, subject to enforcement via civil money penalties.

Since its enactment, there have been executive, judicial and Congressional challenges to certain aspects of the PPACA and we expect there will be additional challenges and amendments to the PPACA in the future. Members of the U.S. Congress have indicated that they may continue to seek to modify, repeal or otherwise invalidate all, or certain provisions of, the PPACA. For example, the Tax Cuts and Jobs Act, or TCJA, was enacted in 2017 and, among other things, removed penalties, starting January 1, 2019, for not complying with the ACA's individual mandate to carry health insurance, commonly referred to as the "individual mandate." In December 2018, a U.S. District Court Judge in the Northern District of Texas ruled that the individual mandate was a critical and inseverable feature of the ACA, and therefore, because it was repealed as part of the TCJA, the remaining provisions of the ACA were invalid and the law in its entirety was unconstitutional. In December 2019, the U.S. Court of Appeals for the Fifth Circuit upheld the District Court ruling that the individual mandate was unconstitutional but remanded the case back to the District Court to determine whether other reforms enacted as part of the ACA but not specifically related to the individual mandate or health insurance could be severed from the rest of the ACA so as not to be declared invalid as well. In March 2020, the United States Supreme Court granted the petitions for writs of certiorari to review this case and allocated one hour for oral arguments, which occurred on November 10, 2020. A decision from the Supreme Court is expected to be issued in Spring 2021. It is unclear how this litigation and other efforts to repeal and replace the PPACA will impact the implementation of the PPACA, the pharmaceutical industry more generally, and our business. Complying with any new legislation or reversing changes implemented under the PPACA could be time-intensive and expensive, resulting in a material adverse effect on our business.

In addition, other legislative changes have been proposed and adopted in the United States since the PPACA that affect healthcare expenditures. These changes include aggregate reductions to Medicare payments to providers of up to

2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013 and will remain in effect through 2030 unless additional Congressional action is taken. The Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, which was signed into law on March 27, 2020 and was designed to provide financial support and resources to individuals and businesses affected by the COVID-19 pandemic, suspended the 2% Medicare sequester from May 1, 2020 through December 31, 2020, and extended the sequester by one year, through 2030, in order to offset the added expense of the 2020 cancellation. The 2021 Consolidated Appropriations Act was subsequently signed into law on December 27, 2020 and extended the CARES Act suspension period to March 31, 2021. The most recently enacted pandemic-relief legislation, the American Rescue Plan Act of 2021, which President Biden signed into law on March 11, 2021, also includes significant healthcare system reforms and programs intended to strengthen the insurance marketplace established under the PPACA, among others.

Moreover, there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. DHHS has solicited feedback on some of various measures intended to lower drug prices and reduce the out of pocket costs of drugs and implemented others under its existing authority. For example, in May 2019, DHHS issued a final rule to allow Medicare Advantage plans the option to use step therapy for Part B drugs beginning January 1, 2020. This final rule codified a DHHS policy change that was effective January 1, 2019. Congress and the executive branch have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs, making this area subject to ongoing uncertainty.

Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. In December 2020, the U.S. Supreme Court held unanimously that federal law does not preempt the states' ability to regulate pharmaceutical benefit managers (PBMs) and other members of the healthcare and pharmaceutical supply chain, an important decision that may lead to further and more aggressive efforts by states in this area.

The FDA's and other regulatory authorities' policies also may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our drug candidates. For example, in December 2016, the 21st Century Cures Act, or Cures Act, was signed into law. The Cures Act, among other things, is intended to modernize the regulation of drugs and devices and to spur innovation, but its ultimate implementation is uncertain. In addition, in August 2017, the FDA Reauthorization Act was signed into law, which reauthorized the FDA's user fee programs and included additional drug and device provisions that build on the Cures Act. In addition, the next cycle of Congressional reauthorization for FDA's prescription drug, biologic, and medical device user fee programs must be completed by mid-2022 and that periodic must-pass legislation is typically used as a vehicle to implement federal policy changes or other substantive amendments to the FDCA. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, we may not achieve or sustain profitability, which would adversely affect our business, prospects, financial condition and results of operations.

We expect that the PPACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and lower reimbursement, and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government-funded programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our product candidates, once regulatory approval is obtained. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, including any future pharmaceutical products for which we secure marketing approval.

Other Healthcare Laws and Compliance Requirements

As we are commercializing our product candidates, if they are approved by the FDA or comparable foreign regulatory agencies for marketing, we will be subject to additional healthcare statutory and regulatory requirements

and enforcement by federal government and the states and foreign governments in the jurisdictions in which we conduct our business. Healthcare providers, physicians and third-party payors will play a primary role in the recommendation and prescription of any other product candidates for which we obtain marketing approval. Our arrangements with third-party payors and customers expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that constrain the business or financial arrangements and relationships through which we market, sell and distribute any products for which we obtain marketing approval.

Restrictions under applicable federal and state healthcare laws and regulations include the following:

- The federal Anti-Kickback Statute prohibits, among other things, any person from knowingly and willfully offering, soliciting, receiving or providing remuneration, directly or indirectly, to induce either the referral of an individual, for an item or service or the purchasing or ordering of a good or service, for which payment may be made under federal healthcare programs such as the Medicare and Medicaid programs. The federal Anti-Kickback Statute is subject to evolving interpretations. In the past, the government has enforced the federal Anti-Kickback Statute to reach large settlements with healthcare companies based on sham consulting and other financial arrangements with physicians. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act;

- The federal civil and criminal false claims laws, including the civil False Claims Act, and civil monetary penalty laws, prohibit, among other things, knowingly presenting or causing the presentation of a false, fictitious or fraudulent claim for payment to the U.S. government, knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the U.S. government, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the U.S. government. Actions under these laws may be brought by the Attorney General or as a qui tam action by a private individual in the name of the government. The federal government uses these laws, and the accompanying threat of significant liability, in its investigation and prosecution of pharmaceutical and biotechnology companies throughout the U.S., for example, in connection with the promotion of products for unapproved uses and other allegedly unlawful sales and marketing practices;

- The U.S. federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created new federal, civil and criminal statutes that prohibit among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- The Physician Payments Sunshine Act, enacted as part of the PPACA, among other things, imposes reporting requirements on manufacturers of FDA-approved drugs, devices, biologics and medical supplies covered by Medicare, Medicaid, or the Children's Health Insurance Program to report, on an annual basis, to the Centers for Medicare & Medicaid Services, or CMS, information related to payments and other transfers of value to physicians (defined to include doctors, dentists, optometrists, podiatrists, chiropractors and, beginning in 2022 for payments and other transfers of value provided in the previous year, certain advanced non-physician healthcare practitioners), teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their respective implementing regulations impose specified requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to "business associates," defined as independent contractors or agents of covered entities, which include certain healthcare providers, health plans, and healthcare clearinghouses, that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also

increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney's fees and costs associated with pursuing federal civil actions;

- Analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, that may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers;

- State laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures to the extent that those laws impose requirements that are more stringent than the Physician Payments Sunshine Act, as well as state and local laws that require the registration of pharmaceutical sales representatives; and

- State laws and foreign laws and regulations (particularly European Union laws regarding personal data relating to individuals based in Europe) that govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways, thus complicating compliance efforts.

Moreover, in November 2020, the DHHS finalized significant changes to the regulations implementing the Anti-Kickback Statute, with the goal of offering the healthcare industry more flexibility and reducing the regulatory burden associated with those fraud and abuse laws, particularly with respect to value-based arrangements among industry participants.

Ensuring that our current and future business arrangements with third parties comply with applicable healthcare laws and regulations involve substantial costs. Because of the breadth of these laws and the narrowness of available statutory and regulatory exemptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws and that governmental authorities may conclude that our business practices may not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of the federal and state laws described above or any other governmental regulations that apply to us, we may be subject to significant civil, criminal and administrative penalties, including monetary penalties, damages, fines, disgorgement, imprisonment, loss of eligibility to obtain approvals from the FDA, exclusion from participation in government contracting, healthcare reimbursement or other government programs, including Medicare and Medicaid, injunctions, reputational harm, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. If any of the physicians or other healthcare providers or entities with whom we expect to do business in the future is found to be not in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs. We may also be subject to additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement with a governmental entity to resolve allegations that we have violated these laws. To the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Facilities

We do not lease or own any real property.

Employees

As of May 7, 2021, we had one full-time employee and eleven consultants. None of our employees or consultants are represented by a labor organization or are party to a collective bargaining arrangement. We consider our relationship with our employee to be good.

Legal Proceedings

From time to time, we may be involved in various claims and legal proceedings relating to claims arising out of our operations. We are not currently a party to any material legal proceedings.

Corporate Structure

We were incorporated under the laws of Alberta, Canada on August 24, 2012 under the name ReVasCor Inc. and were continued under the Canada Business Corporations Act on February 27, 2013 under the name of XORTX Pharma Corp. Upon completion of a reverse take-over transaction on January 10, 2018 with APAC Resources Inc. ("APAC"), a company incorporated under the laws of British Columbia, we changed our name to "XORTX Therapeutics Inc." and XORTX Pharma Corp. became a wholly-owned subsidiary.

Our registered office is located at Suite 4000, 421 – 7th Avenue SW, Calgary, Alberta, Canada T2P 4K9 and our telephone number is (403) 455-7727. Our website address is www.xortx.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

MANAGEMENT

Executive Officers and Directors

The following table provides information with respect to our directors and executive officers as of the date of this prospectus. The address for our directors and executive officers is c/o XORTX Therapeutics Inc., Suite 4000, 421 – 7th Avenue S.W., Calgary, Alberta, Canada T2P 4K9.

Name	Residence	Age	Position(s)
Executive Officers			
Allen Warren Davidoff	Alberta, Canada	60	President, Chief Executive Officer and Director
James Neville Fairbairn	Ontario, Canada	62	Chief Financial Officer
Directors			
W. Bruce Rowlands (1)	Ontario, Canada	60	Chairman of the Board and Director
Paul Joseph Van Damme (1)	Ontario, Canada	71	Director
Ian McCulloch Klassen (1)	British Columbia, Canada	54	Director
Allan William Williams	British Columbia, Canada	64	Director
William Farley	New York, United States	66	Director

(1) Member of the Audit Committee

Executive Officers

Allen Warren Davidoff, PHD

Dr. Allen Davidoff has been the President and Chief Executive Officer of the Company since 2018 and of its predecessor company, XORTX Pharma Corp. since 2012. Dr. Davidoff is also a Director. Dr. Davidoff founded and served as Chief Scientific Officer of Stem Cell Therapeutics from 2002 to 2011. Dr. Davidoff has a broad range of clinical and regulatory experience and senior management experience in pharmaceutical research and development, including two IND applications or supplemental IND's, two Phase I studies, seven Phase II studies and one NDA.

James Neville Fairbairn, CPA, ICD.D

James Fairbairn has been the Chief Financial Officer of the Company since 2018. Mr. Fairbairn is a Chartered Professional Accountant ("CPA") and a Chartered Accountant ("CA"), having obtained his CA designation in 1987 and is an Institute-certified Director. Mr. Fairbairn holds a Bachelor of Arts from Western University He is an officer and director of several junior listed companies. Since 1987 Mr. Fairbairn has been the president of 1282803 Ontario Inc. which provides CFO consulting services to private and public companies.

Board of Directors

Bruce Rowlands, Chairman

Bruce Rowlands has held the position of Chairman since May 2018 and a director of XORTX Pharma Corp., the Company's predecessor since 2014. Mr. Rowlands has also served as director of A-Labs Capital II Corp. since 2018. Mr. Rowlands served as chief executive officer of Eurocontrol Technics Group Inc. ("Eurocontrol"), a TSXV listed company, from 2006 to 2018 and as a director of Eurocontrol from 2006 to 2018. Prior to forming Eurocontrol, Mr. Rowlands worked in the biotechnology and investment banking industries as Senior Vice President with Lorus Therapeutics, Inc., a leading Canadian biotechnology company and Vice President and Director of Dominick and Dominick Securities Canada, a Canadian investment banking firm.

Allen Warren Davidoff, PHD

Please see Dr. Davidoff's details in the Executive Officers section above.

Ian Klassen

Ian Klassen has served as a director of the Company since 2020. Mr. Klassen has served as director and chief executive officer of Grande Portage Resources Ltd. since 2006. Mr. Klassen has served as director and chief executive officer of GMV Minerals Inc. since 2007. Mr. Klassen has served as director of eXeBlock Technology Corporation since September 2017. Mr. Klassen served as director of Canabo Medical Corp., now Aleafia Health Inc., from 2014 to 2018, G6 Materials Corp. from 2012 to 2016, Sixty North Gold Mining Ltd. from 2017 to 2019 and Transcanna Holdings Inc. from 2019 to 2020. Mr. Klassen brings almost 30 years of business management, public relations and government affairs experience to the Company. He has extensive experience in the administration of public companies, finance, government policy, media relationship strategies, business/government project management and legislative decision-making. Mr. Klassen has extensive experience chairing governance, audit, and risk assessment and compensation committees. He holds a B.A. (Honours) from the University of Western Ontario and is a recipient of the Commemorative Medal for the 125th Anniversary of the Confederation of Canada in recognition of his significant contribution to his community and country.

Paul Van Damme, B COMM, CPA, MBA

Paul Van Damme has served as a director of the Company and chairman of the audit committee since 2018. Mr. Van Damme served as director of OncoQuest Inc., a subsidiary of Quest PharmaTech Inc. from 2015 to 2020. Mr. Van Damme served as chief financial officer of Structural Genomics Consortium 2012 to 2019 and as chief financial officer of Bradmer Pharmaceutics Inc. from 2007 to 2018. Mr. Van Damme holds a B.Comm. from the University of Toronto and a MBA from the Rotman School of Management. Mr. Van Damme is a Chartered Professional Accountant, who worked for PricewaterhouseCoopers in its Toronto and London, UK offices.

Allan Williams

Allan Williams has served as a director of the Company since 2018. Mr. Williams, an independent businessman, brings over 30 years capital market and public company experience to the Company's board. During his extensive career in the mining industry and more recently the entertainment community, Mr. Williams has been instrumental in raising over $250 million in project capital. He also has extensive mergers and acquisitions experience, most recently relating to the acquisition of Calico Resources Corp., a TSXV listed company, by Paramount Gold Nevada Corp., a New York Stock Exchange listed company. Mr. Williams has served as a director of KAPA Capital Inc. since 2018. Mr. Williams served as director of Maritime Resources Corp. from 2008 to 2018, Greatbanks Resources Ltd. from 2003 to 2018, True Grit Resources from 2012 to 2018, One World Lithium Inc. from 2016 to 2018 and Calico Resources Corp. from 2009 to 2016.

William Farley

William Farley was appointed as a director of the Company in May 2021. Mr. Farley has over 35 years of experience in leadership, business development, and sales related to drug discovery, development, and partnering. Mr. Farley has served as the Vice President of Business Development at Sorrento Therapeutics, Inc. since 2016. Mr. Farley began his career at Johnson and Johnson, and has also held senior management positions at Pfizer, HitGen Ltd., WuXi Apptec, Inc., and ChemDiv, where he created, built and led global business development teams, and led numerous efforts to create new therapeutic companies in CNS, oncology and anti-infectives. Mr. Farley currently serves on the board of directors of SOMA and as a consultant to various executive management teams, and also advises several boards of directors on the commercialization of assets. He received his Bachelor of Science degree in Chemistry from State University of New York, Oswego and has taken graduate courses at Rutgers and University of California, Irvine.

Corporate Governance

Nasdaq Listing Rule 5620(c) requires that a listed company's bylaws provide for a quorum for any meeting of the holders of the company's common shares of no less than 33 1/3% of the outstanding shares of the company's common stock. Pursuant to the Nasdaq corporate governance rules we, as a foreign private issuer, have elected to comply with practices that are permitted under Canadian law in lieu of the provisions of certain Nasdaq requirements. Our articles provide that a quorum of shareholders for the transaction of business at a meeting of shareholders is two

shareholders, or one or more proxyholder representing two members, or one member and a proxyholder representing another member.

Except as stated above, we intend to comply with the rules generally applicable to U.S. domestic companies listed on the Nasdaq. We may in the future decide to use other foreign private issuer exemptions with respect to some of the other listing requirements. Following our home country governance practices, as opposed to the requirements that would otherwise apply to a company listed on the Nasdaq, may provide less protection than is accorded to investors under listing requirements applicable to U.S. domestic issuers.

The Canadian Securities Administrators has issued corporate governance guidelines pursuant to National Policy 58-201–Corporate Governance Guidelines (the "Corporate Governance Guidelines"), together with certain related disclosure requirements pursuant to National Instrument 58-101—Disclosure of Corporate Governance Practices, or NI 58-101. The Corporate Governance Guidelines are recommended as "best practices" for issuers to follow. We recognize that good corporate governance plays an important role in our overall success and in enhancing shareholder value and, accordingly, we will be adopting in connection with the closing of this offering, certain corporate governance policies and practices which reflect our consideration of the recommended Corporate Governance Guidelines.

The disclosure set out below includes disclosure required by NI 58-101 describing our approach to corporate governance in relation to the Corporate Governance Guidelines.

Board Composition and Election of Directors

Composition and Removal of Directors

Our board of directors currently consists of six members. Under our articles and the BCBCA, a director may be removed with or without cause by a resolution passed by a special majority of the votes cast by shareholders present in person or by proxy at a meeting and who are entitled to vote.

Replacement or Removal of Directors

To the extent directors are elected or appointed to fill casual vacancies or vacancies arising from the removal of directors, in both instances whether by shareholders or directors, the directors shall hold office until the remainder of the unexpired portion of the term of the departed director that was replaced.

Under the articles, the number of directors of XORTX will be set at a minimum of three and the directors are authorized to determine the actual number of directors to be elected from time to time.

We have no formal policy regarding board diversity. Our priority in the selection of our board members is identifying members who will further the interests of our shareholders through his or her established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business and understanding of the competitive landscape.

Director Term Limits and Other Mechanisms of Board Renewal

Our board of directors has not adopted director term limits or other automatic mechanisms of board renewal.

Independence of the Members of the Board of Directors

Director Independence

Applicable Nasdaq rules require a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. The policies of the CSE require that we comply with applicable corporate law in connection with outside directors or unrelated directors and the CSE encourages its listed issuers to consider the appropriateness of outside directors and unrelated directors on their boards. Under applicable Nasdaq rules, a director will only qualify as an "independent director" if, in the opinion of the listed company's board of directors, that person does not have a material relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Under NI 58-101, a director is considered to be independent if he or she is independent within the meaning of National Instrument 52-110-Audit Committees, or NI 52-110.

Pursuant to NI 52-110, an independent director is a director who is free from any direct or indirect relationship which could, in the view of our board of directors, be reasonably expected to interfere with a director's independent judgment.

Consistent with these considerations, and based on information provided by each director concerning his or her background, employment and affiliations, our board of directors has affirmatively determined that W. Bruce Rowlands, Paul Joseph Van Damme, Ian McCulloch Klassen, Allan William Williams, and William Farley, representing 5 of 6 members of our board of directors, are "independent" as that term is defined under the listing standards of the Nasdaq and NI 58-101. In making this determination, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our shares by each non-employee director. Dr. Davidoff is not independent by reason of the fact that he is our Chief Executive Officer.

Mandate of the Board of Directors

Our board of directors will hold regularly-scheduled quarterly meetings as well as ad hoc meetings from time to time. The independent members of our board of directors will also meet, as required, without the non-independent directors and members of management before or after each regularly scheduled board meeting.

A director who has a material interest in a matter before our board of directors or any committee on which he or she serves is required to disclose such interest as soon as the director becomes aware of it. In situations where a director has a material interest in a matter to be considered by our board of directors or any committee on which he or she serves, such director may be required to absent himself or herself from the meeting while discussions and voting with respect to the matter are taking place. Directors will also be required to comply with the relevant provisions of our articles and the BCBCA regarding conflicts of interest.

Meetings of Directors

Our board of directors is responsible for the stewardship of the Company and providing oversight as to the management of our business and affairs, including providing guidance and strategic oversight to management. Our board has adopted a formal mandate that will be effective immediately prior to the consummation of this offering and include the following:

- appointing our Chief Executive Officer;
- developing the corporate goals and objectives that our Chief Executive Officer is responsible for meeting and reviewing the performance of our Chief Executive Officer against such corporate goals and objectives;
- taking steps to satisfy itself as to the integrity of our Chief Executive Officer and other executive officers and that our Chief Executive Officer and other executive officers create a culture of integrity throughout the organization;
- reviewing and approving our Code of Conduct and reviewing and monitoring compliance with the Code of Conduct and our enterprise risk management processes;
- adopting a strategic planning process to establish objectives and goals for our business and reviewing, approving, and modifying, as appropriate, the strategies proposed by management to achieve such objectives and goals; and
- reviewing and approving material transactions not in the ordinary course of business.

Board Committees

Our board of directors has an audit committee. In connection with this offering and a potential listing of our common shares on Nasdaq, we plan to establish a compensation committee and a corporate governance and nominating committee.

Audit Committee

Our audit committee consists of Mr. Klassen, Mr. Rowlands, and Mr. Van Damme. Mr. Van Damme serves as the chair of our audit committee and has been identified as an "audit committee financial expert" as that term is defined

in the rules and regulations established by the SEC. The members of our audit committee are "financially literate" and "independent" within the meaning of the Nasdaq and NI 52-110. For additional details regarding the relevant education and experience of each member of our audit committee see "Management—Executive Officers and Directors." The principal purpose of our audit committee is to assist our board of directors in its oversight of:

- the quality and integrity of our financial statements and related information;
- the independence, qualifications, appointment and performance of our external auditor;
- our disclosure controls and procedures, internal control over financial reporting and management's responsibility for assessing and reporting on the effectiveness of such controls;
- our compliance with applicable legal and regulatory requirements; and
- our enterprise risk management processes.

Our board of directors has established a written charter that will be effective immediately prior to the consummation of the offering setting forth the purpose, composition, authority and responsibility of our audit committee, consistent with the rules of the Nasdaq, the SEC and NI 52-110.

Our audit committee has access to all of our books, records, facilities and personnel and may request any information about us as it may deem appropriate. It also has the authority in its sole discretion and at our expense, to retain and set the compensation of outside legal, accounting or other advisors as necessary to assist in the performance of its duties and responsibilities.

Both our independent auditors and internal financial personnel regularly meet privately with the audit committee and have unrestricted access to this committee. Smythe LLP was retained as auditor of the Company's predecessor, XORTX Pharma Corp., and continued as auditor of the Company effective January 9, 2018, the date of the reverse take-over between APAC Resources Inc. and XORTX Pharma Corp. to form XORTX Therapeutics Inc. Prior to Smythe LLP being retained, Manning Elliott LLP acted as auditor of the Company from May 31, 2011 to January 9, 2018. Aggregate fees billed by our independent auditors, Smythe LLP for the year ended December 31, 2020 were approximately $18,750.

	December, 31 2020 ($)	December, 31 2019 ($)	December, 31 2018 ($)	February 28, 2017 ($)(1)(2)
Audit Fees	$ 18,750	$ 19,500	$ 13,500	$ 12,500
Audit-Related Fees	—	—	—	—
Tax Fees	—	6,000	3,000	—
All Other Fees	—	—	950	—
Total Fees Paid	$ 18.750	$ 25,500	$ 17,450	$ 12,500

(1) Audit fees for the year ended February 28, 2017 relate to APAC Resources Inc. fiscal years ended February 28, 2017. The Company's fiscal year end was changed to December 31 on January 9, 2018 in connection with the reverse-takeover transaction between APAC Resources Inc. and XORTX Pharma Corp.
(2) No additional audit fees were incurred by the Company from the period from February 28, 2017 to December 31, 2017.

Compensation Committee

In connection with this offering and a potential listing of our common shares on Nasdaq, we plan to establish a compensation committee. We expect that the initial compensation committee will consist of , and . Each proposed member of the compensation committee qualifies as "independent" under the listing standards of Nasdaq, the rules and regulations of the SEC and NI 52-110. For additional details regarding the relevant education and experience of each member of our proposed compensation committee see "Management—Executive Officers and Directors." The principal purpose of our proposed compensation committee is to:

- review and make recommendations to the board of directors regarding the corporate goals and objectives, performance and compensation of the Chief Executive Officer and other senior executive officers on an annual basis;
- evaluate the performance of the Chief Executive Officer and other senior executive officers;

- make recommendations to the board of directors with respect to the compensation policies for the non-employee directors;
- make recommendations regarding annual bonus policies for employees, the incentive-compensation plans and equity-based plans for our company; and
- review executive compensation disclosure before our company publicly discloses this information.

Corporate Governance and Nominating Committee

In connection with this offering and a potential listing of our common shares on Nasdaq, we plan to establish a corporate governance and nominating committee. We expect that the initial compensation committee will consist of , and . Each proposed member of the corporate governance and nominating committee qualifies as "independent" under the listing standards of Nasdaq, the rules and regulations of the SEC and NI 52-110. For additional details regarding the relevant education and experience of each member of our corporate governance and nominating committee see "Management—Executive Officers and Directors." The principal purpose of our proposed corporate governance and nominating committee is to:

- identify qualified individuals to become members of the board of directors, consistent with criteria approved by the board of directors;
- determine the composition of the board of directors and its committees;
- select the director nominees for the next annual meeting of shareholders;
- monitors a process to assess the board of directors, committee and management effectiveness;
- aid and monitor management succession planning; and
- develop, recommend to the board of directors, implement and monitor policies and processes related to our Company's corporate governance guidelines.

Director Attendance

Each director has attended all board meetings that we have held since January 1, 2020.

Code of Business Conduct and Ethics

The Code of Conduct will be applicable to all of our directors, officers and employees, including our Chief Executive Officer, Chief Financial Officer, controller or principal accounting officer, or other persons performing similar functions, which is a "code of ethics" as defined in Item 16B of Form 20-F promulgated by the SEC and which is a "code" under NI 58-101. The Code of Conduct will set out our fundamental values and standards of behavior that are expected from our directors, officers, employees, consultants and contractors with respect to all aspects of our business. The objective of the Code of Conduct is to provide guidelines to promote integrity and deter wrongdoing.

Upon the effectiveness of the registration statement of which this prospectus forms a part, the full text of the Code of Conduct will be posted on our website at www.xortx.com. The written Code of Conduct will also be filed with the Canadian securities regulatory authorities on SEDAR at www.sedar.com. Information contained on, or that can be accessed through, our website does not constitute a part of this prospectus and is not incorporated by reference herein. If we make any amendment to the Code of Conduct or grant any waivers, including any implicit waiver, from a provision of the code of ethics, we will disclose the nature of such amendment or waiver on our website to the extent required by the rules and regulations of the SEC and the Canadian Securities Administrators. Under Item 16B of the SEC's Form 20-F, if a waiver or amendment of the Code of Conduct applies to our principal executive officer, principal financial officer, principal accounting officer or controller and relates to standards promoting any of the values described in Item 16B(b) of Form 20-F, we will disclose such waiver or amendment on our website in accordance with the requirements of Instruction 4 to such Item 16B.

Monitoring Compliance with the Code of Conduct

Following the closing of this offering and a potential listing on Nasdaq, our corporate governance and nominating committee will be responsible for reviewing and evaluating the Code of Conduct at least annually and will recommend any necessary or appropriate changes to our board of directors for consideration. The corporate governance and nominating committee will assist our board of directors with the monitoring of compliance with the Code of Business Conduct and Ethics, and will be responsible for considering any waivers of the Code of Conduct (other than waivers applicable to members of the corporate governance and nominating committee, which shall be considered by the audit committee, or waivers applicable to our directors or executive officers, which shall be subject to review by our board of directors as a whole).

Position Descriptions

Our board of directors has adopted a written position description for the Chairman of the board of directors that will be effective immediately prior to the consummation of the offering, which sets out the Chairman's key responsibilities, including, among others, duties relating to setting board of director meeting agendas, chairing board of director and shareholder meetings, director development and ensuring the board of directors is provided with timely and relevant information to effectively discharge its duties and responsibilities.

Our board of directors will adopt a written position description for each of our committee chairs which sets out each of the committee chair's key responsibilities, including, among others, duties relating to setting committee meeting agendas, chairing committee meetings and working with the respective committee and management to ensure, to the greatest extent possible, the effective functioning of the committee.

Our board of directors will adopt a written position description for our Chief Executive Officer which sets out the key responsibilities of our Chief Executive Officer, including, among other duties in relation to providing overall leadership, working with the board of directors to develop our strategic direction and the annual corporate plan and budget, and managing the day-to-day business and affairs of the Company and carrying out such duties and responsibilities as is customary for a Chief Executive Officer of a company in a similar industry and stage of development.

Orientation and Continuing Education

Our board of directors does not have a formal orientation or education program for its members. Our board of directors continuing education is typically derived from the Company's legal counsel to remain up to date with developments in relevant corporate and securities law matters.

Advisors to Directors and Executive Officers

On August 7, 2020, the Company announced the appointment of Dr. David Sans as Director of Corporate Development to be based in New York City. This position is not a member of the Board of Directors of the Company. Dr. Sans is responsible for planning and facilitation of XORTX corporate goals. Dr. Sans is Board Certified in Regenerative Medicine from the American Board of Regenerative Medicine ("ABRM") and has a Master's Degree in Chemical Engineering as well as a Ph.D. in Life Sciences and a MBA in Business Law.

EXECUTIVE AND DIRECTOR COMPENSATION

Introduction

The following section describes the significant elements of our executive and director compensation program. Our named executive officers for the year ended December 31, 2020 include our principal executive officer and our principal accounting officer.

Overview

Compensation Philosophy

The goal of our compensation program is to attract, retain and motivate our employees and executives. The board of directors is responsible for setting our executive compensation and establishing corporate performance objectives. However, in connection with this offering and a potential listing on Nasdaq we will form a compensation committee. In considering executive compensation, the board of directors strives to ensure that our total compensation is competitive within the industry in which we operate and supports our overall strategy and corporate objectives. The combination of base salary, annual incentives and long-term incentives that we provide our executive officers is designed to accomplish this. The compensation committee considers the implications of the risks associated with our compensation policies and practices. For additional details regarding the relevant education and experience of each member of our compensation committee see "Management—Executive Officers and Directors." Our named executive officers and directors are not permitted to purchase financial instruments, including, for greater certainty, prepaid variable forward contracts, equity swaps, collars, or units of exchange funds that are designed to hedge or offset a decrease in market value of equity securities granted as compensation or held, directly or indirectly, by the named executive officer or director.

Components of Compensation Package

Compensation for the executive officers is composed primarily of three components: base compensation, performance bonuses and the granting of options. Performance bonuses may be considered from time to time.

Determining Compensation

Our board of directors is responsible for ensuring that the Company has in place an appropriate plan for executive compensation ensuring that total compensation paid to all executive officers is fair and reasonable and is consistent with the Company's compensation philosophy and in line with industry practice. In connection with the offering and the potential listing on Nasdaq we plan to form a compensation committee.

Our board of directors does not have a pre-determined compensation plan, but rather reviews the performance of the executive officers and considers a variety of factors, when determining compensation levels. These factors, which are informally discussed by the Board of Directors, include the long-term interests of the Company and its Shareholders, the financial and operating performance of the Company and each executive officer's individual performance, contribution towards meeting corporate objectives, responsibilities and length of service. Our board of directors believes that the compensation arrangements for the Company's executive officers are commensurate with the executive officer's position, experience and performance. The directors of the Company will continue to review compensation philosophy to ensure that the Company is competitive and that compensation is consistent with the performance of the Company.

Other Compensation

Amounts shown in the "All Other Compensation" column in the Summary Compensation Table relate to contributions to our registered retirement savings plan, provincial healthcare premium, life insurance premiums through our group extended benefit plan, extended medical benefits premiums, parking charges at our office and fitness plan reimbursement.

Director Compensation

The written charter of our compensation committee provides that the committee will review compensation for members of our board of directors on at least an annual basis, taking into account their responsibilities and time commitment and information regarding the compensation paid at peer companies. The compensation committee will make recommendations to our board of directors with respect to changes to our approach to director compensation as it considers appropriate.

During the period ended December 31, 2020, the non-executive directors of the Company received no compensation for director services.

Other than granting options, the Company currently has no compensation arrangements with its non-executive directors.

Each member of our board of directors is entitled to reimbursement for reasonable travel and other expenses incurred in connection with attending board meetings and meetings for any committee on which he or she serves.

Summary Compensation Table

The following table presents the compensation awarded to, earned by or paid to each of our named executive officers and our non-executive directors for the years ended December 31, 2020 and 2019. We do not have compensation in the form of share-based awards (other than stock options), non-equity incentive plan compensation or non-qualified deferred compensation.

Name and Position	Year	Salary, consulting fee, retainer or commission $(1)	Bonus $(1)	Option Awards $(1)(2)	All Other Compensation $(1)	Total $(1)
Allen Davidoff, CEO	2020	192,000	—	29,683	—	221,683
	2019	192,000	—	17,137	—	209,137
James Fairbairn, CFO	2020	30,000	—	16,510	—	46,510
	2019	30,000	—	12,510	—	42,510
Ian Klassen, Director	2020	—	—	34,224	—	34,224
	2019	—	—	—	—	—
Bruce Rowlands, Director	2020	36,000	—	39,651	—	75,651
	2019	—	—	—	—	—
Paul Van Damme, Director	2020	—	—	32,583	—	32,583
	2019	—	—	—	—	—
Allan Williams, Director	2020	—	—	32,583	—	32,583
	2019	—	—	—	—	—
William Farley, Director	2020	—	—	—	—	—
	2019	—	—	—	—	—
Bruce Cousins, Former Director (3)	2020	—	—	32,583	—	32,583
	2019	—	—	—	—	—

(1) Cash compensation amounts for all named executive officers were paid in Canadian dollars.
(2) The amounts set forth in this column reflect the aggregate grant date fair value for option awards computed in accordance with IFRS. See the “Notes to Consolidated Financial Statements—Summary of Significant Accounting Policies—Share-based compensation.”
(3) Bruce Cousins was elected as a director on June 27, 2018 and resigned effective August 26, 2020.

Outstanding Equity Awards at 2020 Fiscal Year End

The following table lists all outstanding equity awards held by our named executive officers and non-executive directors as of December 31, 2020.

Name	Grant Date	Number of Securities Underlying Unexercised Options # Exercisable	Number of Securities Underlying Unexercised Options # Unexercisable	Option Exercise Price ($)	Option Expiration Date
Allen Davidoff, CEO	March 19, 2018	500,000	—	0.50	March 19, 2023
	June 23, 2020	125,000	375,000(3)	0.14	June 23, 2025
James Fairbairn, CFO	November 5, 2018	194,444	55,556(3)	0.50	November 5, 2023
	June 23, 2020	62,500	187,500(3)	0.14	June 23, 2025
Ian Klassen, Director	August 27, 2020	150,000	—	0.24	August 27, 2025
	January 11, 2021	350,000	—	0.28	January 11, 2026
Bruce Rowlands, Director	March 19, 2018	150,000	—	0.50	March 19, 2023
	June 23, 2020	337,500	112,500(4)	0.14	June 23, 2025
Paul Van Damme, Director	March 19, 2018	150,000	—	0.50	March 19, 2023
	June 23, 2020	300,000	—	0.14	June 23, 2025
Allan Williams, Director	March 19, 2018	150,000	—	0.50	March 19, 2023
	June 23, 2020	300,000	—	0.14	June 23, 2025

(1) These figures represent the number of vested and exercisable options multiplied by the applicable option exercise price.
(2) Options vest and become exercisable in 36 equal monthly installments following the first anniversary of the grant date.
(3) 300,000 options vested immediately upon grant, the remaining 150,000 vest and become exercisable in 36 equal monthly installments following the first anniversary of the grant date.

Executive Employment Arrangements and Termination and Change in Control Benefits

The Company employs Dr. Allen Davidoff as the Company's President and CEO at an annual salary of $192,000, pursuant to that certain Employment Agreement dated January 1, 2018, between the Company and Dr. Allen Davidoff (the "Davidoff Agreement"). The Davidoff Agreement contains standard confidentiality and non-compete clauses and has an indefinite term. The Davidoff Agreement can be terminated by Dr. Davidoff or the Company by providing 30 days' notice. In the case of the Company providing termination notice, Dr. Davidoff would receive the equivalent of six times his then current monthly salary in a lump sum payment if terminated prior to the first anniversary and if after

the first anniversary, Dr. Davidoff is entitled to a lump sum payment of 12 times his then current monthly salary. In the case of a change of control, the Davidoff Agreement provides for a lump sum payment equal to 12 times his monthly base salary amount in effect at the time. As well, all unvested Options then held by Dr. Davidoff shall be deemed to have vested upon any such termination.

The Company entered into a contract with 1282803 Ontario Inc., dated March 1, 2021, for consulting services to the Company to appoint James Fairbairn as the appointed consultant to act in the capacity as chief financial officer, (the "Fairbairn Consulting Agreement"), pursuant to which 1282803 Ontario Inc. is entitled to compensation for the provision of such services of base fees of $8,000 per month, with a discretionary bonus of up to $28,800 to be determined by the board of directors, and Mr. Fairbairn is entitled to participate in the Company's stock plan. This agreement may be terminated at any time and for any reason by either party with 30 days' notice.

In addition to the arrangements for our executive officers as set forth above, the Company entered into a contract with Mr. David Sans for consulting services to the Company in the capacity as executive advisor, dated February 1, 2021 (the "Sans Consulting Agreement"), pursuant to which Mr. Sans is entitled to compensation for the provision of such services of base fees of US$11,700 per month, with a onetime bonus of US$144,000 on completion of an offering of at least US$10,000,000 of the Company's shares on a U.S. securities exchange. The agreement generally requires that we indemnify and hold Mr. Sans harmless for liabilities arising out of the Mr. Sans' service, unless the liability resulted from the gross negligence or willful misconduct of Mr. Sans. This agreement may be terminated at any time and for any reason by either party with 30 days' notice.

The Company does not have in place any pension or retirement plan. In connection with or related to the retirement, termination or resignation of such person and the Company has provided no compensation to such persons as a result of change of control of the Company, its subsidiaries or affiliates.

The table below shows the estimated amounts of the termination payments and benefits that will be made to our named executive officers upon the termination of their employment, if such termination were to occur immediately following the completion of this offering. These amounts represent the payments and benefits under the terms of the employment or consulting agreements.

Name and Principal Position	Event	Severance ($)(1)	Options ($)(2)	Other Payments ($)	Total ($)
Allen Davidoff, CEO	Termination by the Company	192,000	—	—	—
	Change of Control	192,000	—	—	—
James Fairbairn, CFO	Termination by the Company	—	—	—	—
	Change of Control	—	—	—	—

(1) Severance payments are calculated based on the executive's base salary.
(2) All options would immediately vest. The value of accelerated vesting of options above is calculated based on the assumed initial public offering price of US$ per share.

Equity Compensation Plan

The following table sets forth aggregated information as at May 7, 2021 with respect to compensation plans of the Company under which equity securities of the Company are authorized for issuance.

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights (#)	Weighted-average Exercise Price of Outstanding Options, Warrants and Rights ($)	Number of Securities remaining available for Future Issuance under Equity Compensation Plans (#)
Equity compensation plans approved by security holders (1)	5,200,000	0.28	5,807,672
Equity compensation plans not approved by security holders	—	—	—
Total	**5,200,000**	**0.28**	**5,807,672**

(1) The Plan is a "rolling" stock option plan whereby the maximum number of Common Shares that may be reserved for issuance pursuant to the Plan will not exceed 10% of the issued shares of the Company at the time of the stock option grant.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

In addition to the compensation arrangements discussed under "Management," the following is a description of the material terms of those transactions with related parties to which we are party and which we are required to disclose pursuant to the disclosure rules of the SEC and the Canadian Securities Administrators.

Employment and Consulting Agreements

We have entered into employment agreements with certain of our executive officers and key employees. For more information regarding these agreements and arrangements, see "Management."

Beneficial Ownership

Since January 1, 2019, no director or executive officer of the Company who beneficially owns, or controls or directs, directly or indirectly more than 10% of the outstanding Common Shares or any known associate or affiliate of such persons, has or has had any material interest direct or indirect, in any transaction or in any proposed transaction that has materially affected or is reasonably expected to material affect the Company except for Prevail Partners LLC ("Prevail"), which owns 11,473,714 common shares, currently representing 14.13% of the outstanding common shares of the Company. Prevail acquired the 11,473,714 common shares as part of the private placement that closed on February 28, 2020, in connection with an agreement between the Company and Prevail wherein the Company paid a deposit of $1,606,320 (US$1,200,000 at the exchange rate on the date of the transaction) to Prevail to support two clinical trials on behalf of the Company.

Policy on Future Related Party Transactions

All future transactions between us and our officers, directors, principal shareholders and their affiliates will be approved by the audit committee, or a similar committee consisting of entirely independent directors, according to the terms of our Code of Conduct.

Requirements under the Business Corporations Act (British Columbia)

Pursuant to the BCBCA, directors and officers are required to act honestly and in good faith with a view to the best interests of the company. Under the BCBCA, subject to certain limited exceptions, a director who holds a disclosable interest in a material contract or transaction into which we have entered or propose to enter shall not vote on any directors' resolution to approve the contract or transaction. A director or officer has a disclosable interest in a material contract or transaction if the director or officer:

- is a party to the contract or transaction;
- is a director or officer, or an individual acting in a similar capacity, of a party to the contract or transaction; or
- has a material interest in a party to the contract or transaction.

Generally, as a matter of practice, directors or officers who have disclosed a material interest in any contract or transaction that our board of directors is considering will not take part in any board discussion respecting that contract or transaction. If such directors were to participate in the discussions, they would abstain from voting on any matters relating to matters in which they have disclosed a disclosable interest.

Interests of Management and Others in Material Transactions

Other than as described elsewhere in this prospectus, there are no material interests, direct or indirect, of any of our directors or executive officers, any shareholder that beneficially owns, or controls or directs (directly or indirectly), more than 10% of any class or series of our outstanding voting securities, or any associate or affiliate of any of the foregoing persons, in any transaction within the three years before the date hereof that has materially affected or is reasonably expected to materially affect us or any of our subsidiaries. See "Management's Discussion and Analysis of Financial Condition and Results of Operations", "Business" and "Certain Relationships and Related Party Transactions."

PRINCIPAL SHAREHOLDERS

The following table indicates information as of May 7, 2021, regarding the beneficial ownership of our common shares, after giving effect to the sale of common shares offered in this offering, for:

- each person who is known by us to beneficially own more than 5% of our common shares;
- each named executive officer;
- each of our directors; and
- all of our directors and executive officers as a group.

Unless otherwise indicated in the footnotes to the table, and subject to community property laws where applicable, the following persons have sole voting and investment control with respect to the shares beneficially owned by them. In accordance with SEC rules, if a person has a right to acquire beneficial ownership of any common shares on or within 60 days of May 7, 2021, upon conversion or exercise of outstanding securities or otherwise, the shares are deemed beneficially owned by that person and are deemed to be outstanding solely for the purpose of determining the percentage of our shares that person beneficially owns. These shares are not included in the computations of percentage ownership for any other person. As of May 7, 2021, we had 59 record holders of our common shares, with 40 record holders in Canada, representing 69.8% of our outstanding common shares, and 16 record holders in the United States, representing 25.0% of our outstanding common shares.

Except as otherwise indicated, the address of each of the persons in this table is Suite 4000, 421 – 7th Avenue SW, Calgary, Alberta, Canada T2P 4K9.

		Percentage of Shares Beneficially Owned	
Name and Address of Beneficial Owner	**Shares Beneficially Owned Prior to the Offering**	**Before Offering**	**After Offering**
5% and Greater Shareholders:			
Prevail Partnerships LLC (1)	11,473,714	10.42%	%
Allen Warren Davidoff (2)	6,036,030	5.20%	%
Directors and Named Executive Officers:			
Allen Warren Davidoff (2)	6,036,030	5.20%	%
James Neville Fairbairn (3)	977,111	0.88%	%
W. Bruce Rowlands (4)	2,424,315	2.15%	%
Paul Joseph Van Damme (5)	1,200,284	1.08%	%
Ian McCulloch Klassen (6)	1,002,000	0.90%	%
Allan William Williams (7)	2,453,270	2.18%	%
William Farley	0	0.00%	0.00%
All executive officers and directors as a group (8 persons)	14,443,010	12.39%	%

* Less than one percent

(1) Consists of 11,473,714 common shares held by Prevail Partners LLC.
(2) Consists of 4,912,220 common shares, warrants exercisable for 457,143 common shares, and options exercisable for 666,667 common shares within 60 days of May 7, 2021, held personally by Mr. Davidoff.
(3) Consists of 578,500 common shares, warrants exercisable for 100,000 common shares, and options exercisable for 298,611 common shares within 60 days of May 7, 2021, held personally by Mr. Fairbairn.
(4) Consists of 1,664,315 common shares, warrants exercisable for 260,000 common shares, and options exercisable for 500,000 common shares within 60 days of May 7, 2021, held personally by Mr. Rowlands.
(5) Consists of 750,284 common shares, and options exercisable for 450,000 common shares within 60 days of May 7, 2021, held personally by Mr. Van Damme.
(6) Consists of 502,000 common shares, and options exercisable for 500,000 common shares within 60 days of May 7, 2021, held personally by Mr. Klassen.
(7) Consists of 2,003,270 common shares, and options exercisable for 450,000 common shares within 60 days of May 7, 2021, held personally by Mr. Williams.

DESCRIPTION OF SHARE CAPITAL

General

The following is a summary of the material rights of our share capital as contained in our notice of articles and articles and any amendments thereto. This summary is not a complete description of the share rights associated with our capital stock. For more detailed information, please see our notice of articles and articles, which are filed as exhibits to the registration statement of which this prospectus forms a part.

Immediately prior to the closing of this offering, our authorized share capital will consist of an unlimited number of common shares, each without par value. We have no preferred shares authorized under our notice of articles or articles. Immediately following the closing of this offering, we expect to have issued and outstanding common shares common shares if the underwriters' over-allotment option is exercised in full). Immediately following the closing of this offering we also expect to have outstanding vested and unvested options granted pursuant to our equity incentive plans to acquire common shares, options available for grant under our equity incentive plans to acquire common shares and outstanding warrants to acquire common shares, assuming an initial public offering price of US$ per common share, which is based on the last reported price of our common shares on the TSXV on May , 2021 of $ per common share.

Common Shares

Outstanding Shares

As a result, upon closing of this offering, based on the common shares outstanding as of May 7, 2021, our authorized share capital will consist of an unlimited number of common shares, each without par value, of which will be issued and outstanding.

As of May 7, 2021, we had 4,568,944 common shares issuable pursuant to exercisable outstanding stock options, 631,056 common shares issuable pursuant to outstanding options that are not currently exercisable, 25,170,626 common shares issuable upon the exercise of outstanding common share warrants, and we had approximately holders of record of our common shares.

Voting Rights

Under our articles, the holders of our common shares will be entitled to one vote for each common share held on all matters submitted to a vote of the shareholders, including the election of directors. Our notice of articles and articles do not provide for cumulative voting rights. Because of this, the holders of a plurality of the common shares entitled to vote in any election of directors can elect all of the directors standing for election, if they so choose.

Dividends

Subject to priority rights that may be applicable to any then outstanding shares, holders of our common shares are entitled to receive dividends, as and when declared by our board of directors in their absolute discretion out of legally available funds. Our board of directors have the right and authority to declare dividends on any class of shares, to the exclusion of and without declaring dividends on any other class of shares, in their sole discretion as they see fit. For more information, see the section titled "Dividend Policy."

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common shares will be entitled to share ratably in the net assets legally available for distribution to shareholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding preferred shares.

Rights and Preferences

Our common shares contain no pre-emptive or conversion rights and have no provisions for redemption or repurchase for cancellation, surrender or sinking or purchase funds. There are no provisions in our notice of articles

and articles requiring holders of common shares to contribute additional capital. The rights, preferences and privileges of the holders of our common shares are subject to and may be adversely affected by, the rights of the holders of any series of new preferred shares that may be created, authorized, designated, and issued in the future.

Fully Paid and Non-assessable

All of our outstanding common shares are, and the common shares to be issued pursuant to this offering, when paid for, will be fully paid and non-assessable.

Corporate Governance

Under the BCBCA, we will be required to hold a general meeting of our shareholders at least once every year at a time and place determined by our board of directors, provided that the meeting must not be held later than 15 months after the preceding annual general meeting. The BCBCA requires that meetings of shareholders shall be held at any place within British Columbia as our board of directors may from time to time determine unless the shareholders approve a different location by an ordinary resolution and this location is approved in writing by the registrar of companies. A notice to convene a meeting, specifying the date, time and location of the meeting must be sent to shareholders, to each director and the auditor not less than 21 days prior to the meeting or such other minimum period as required by the applicable securities laws. Under the BCBCA, shareholders entitled to notice of a meeting may waive or reduce the period of notice for that meeting, provided applicable securities laws requirements are met.

Pursuant to our articles, all business transacted at a special meeting of shareholders (except business relating to the conduct of or voting at the meeting, and all business transacted at an annual meeting of shareholders, except business relating to the conduct of or voting at the meeting, consideration of the financial statements, consideration of any director or auditor's report, election of directors, setting or changing of the number of directors, appointment of the auditor, remuneration of the auditor, business arising out of a report of the directors not requiring the passage of a special resolution, and any other business which, under the articles or BCBCA, may be transacted at a meeting of shareholders without prior notice of the business being given to the shareholders) is deemed to be special business. Notice of a meeting of shareholders at which special business is to be transacted shall (a) state the general nature of that business; and (b) if the special business includes considering, ratifying, adopting or authorizing any document, or the signing of any document, have attached to it the document or state that such document is available for inspection.

Under our articles, our board of directors has the power at any time to call a meeting of our shareholders where special business is to be considered.

Under our articles, and as permitted by the BCBCA, the board of directors may effect a share split or subdivision without shareholder approval.

Those entitled to vote at a meeting are entitled to attend meetings of our shareholders. Every shareholder entitled to vote may appoint one or more (but not to exceed five) proxyholders to attend the meeting in the manner and to the extent authorized and with the authority conferred by the proxy. Directors, auditors, legal counsels, secretaries (if any), and any other persons invited by the chair of the meeting or with the consent of those at the meeting are entitled to attend any meeting of our shareholders but will not be counted in quorum or be entitled to vote at the meeting unless he or she or it is a shareholder or proxyholder entitled to vote at the meeting.

Material Differences Between the BCBCA and the DGCL

The material differences between the BCBCA and Delaware General Corporation Law (the "DGCL") that may have the greatest such effect include, but are not limited to, the following: (i) for material corporate transactions (such as mergers and amalgamations, other extraordinary corporate transactions or amendments to our articles) the BCBCA generally requires a two-thirds majority vote by shareholders (including, in some circumstances, shareholders that otherwise do not have the right to vote), whereas the DGCL generally requires only a majority vote; (ii) under the BCBCA, holders of 5% or more of our shares that carry the right to vote at a meeting of shareholders can requisition a general meeting of shareholders at which special matters may be conducted, whereas such right does not exist under the DGCL; and (iii) unlike the DGCL which does not provide for any oppression remedy for shareholders of Delaware entities, the BCBCA provides an oppression remedy that enables a court to make an order, whether interim or final, if an application is made to the court by a shareholder in a timely manner and it appears to the court that there are reasonable grounds for believing (A) that the affairs of the corporation are being or have been conducted, or the powers of the directors are being or have been exercised, in a manner that is oppressive to one or more shareholders, or (B) that some act of the corporation has been done or is threatened, or that some resolution of the shareholders or of the shareholders holding shares of a class or series of shares has been passed or is proposed, that is unfairly prejudicial to one or more of the shareholders

Certain Takeover Bid Requirements

Unless such offer constitutes an exempt transaction, an offer made by a person, an "offeror", to acquire outstanding shares of a Canadian entity that, when aggregated with the offeror's holdings (and those of persons or companies acting jointly with the offeror), would constitute 20% or more of the outstanding shares in a class, would be subject to the take-over provisions of Canadian securities laws. The foregoing is a limited and general summary of certain aspects of applicable securities law in the provinces and territories of Canada, all in effect as of the date hereof.

In addition to those takeover bid requirements noted above, the acquisition of our shares may trigger the application of statutory regimes including among others, the Investment Canada Act (Canada) and the Competition Act (Canada).

Limitations on the ability to acquire and hold our shares may be imposed by the Competition Act (Canada). This legislation permits the Commissioner of Competition, or the Commissioner, to review any acquisition of control over

or of a significant interest in us. This legislation grants the Commissioner jurisdiction, for up to one year after closing, to challenge this type of acquisition before the Canadian Competition Tribunal on the basis that it would, or would be likely to, substantially prevent or lessen competition in any market in Canada.

Since we are a publicly-traded corporation, this legislation also requires any person who intends to acquire our voting shares to file a notification with the Canadian Competition Bureau if certain financial thresholds are exceeded and if that person (and their affiliates) would hold more than 20% of our voting shares as a result of such acquisition. If a person already owns more than 20% of our voting shares, a notification must be filed before the acquisition of additional voting shares that would bring that person's holdings to over 50%. Where a notification is required, the legislation prohibits completion of the acquisition until the expiration of a statutory waiting period or, if applicable, a second statutory waiting period, unless the Commissioner provides written notice that he does not intend to challenge the acquisition. A common closing condition of acquisitions subject to notification under the Competition Act (Canada) is clearance from the Commissioner, even if the applicable statutory waiting period has expired and the parties are in a legal position to close.

The Investment Canada Act (Canada) requires any person that is a "non-Canadian" (as defined in the Investment Canada Act (Canada)) who acquires control of an existing Canadian business, where the acquisition of control is not a reviewable transaction, to file a notification with Innovation, Science and Economic Development. The Investment Canada Act (Canada) generally prohibits the implementation of a reviewable transaction unless, after review, the relevant minister is satisfied that the investment is likely to be of net benefit to Canada. Under the Investment Canada Act (Canada), the acquisition of control of us (either through the acquisition of our shares or all or substantially all our assets) by a non-Canadian would be reviewable under the "net benefit" standard only if the applicable specified financial threshold is met or exceeded and no exemption applied.

The acquisition of a majority of the voting interests of an entity is deemed to be acquisition of control of that entity. The acquisition of less than a majority but one-third or more of the voting shares of a corporation or an equivalent undivided ownership interest in the voting shares of a corporation is presumed to be an acquisition of control of that corporation unless it can be established that, on the acquisition, the corporation is not controlled in fact by the acquirer through the ownership of voting shares. The acquisition of less than one-third of the voting shares of a corporation is deemed not to be an acquisition of control of that corporation

Under the national security regime in the Investment Canada Act (Canada), a national security review on a discretionary basis may also be undertaken by the federal government in respect of a much broader range of investments by a non-Canadian to "acquire, in whole or in part, or to establish an entity carrying on all or any part of its operations in Canada", provided that the entity has a specified nexus to Canada. The relevant test is whether such an investment by a non-Canadian could be "injurious to national security." The relevant minister has broad discretion to determine whether an investor is a non-Canadian and may be subject to national security review. Review on national security grounds is at the discretion of the federal government and, depending on the facts, may occur on a pre- or post-closing basis and includes the ability to block a transaction or, for a completed transaction, order divestiture.

There is no law, governmental decree or regulation in Canada that restricts the export or import of capital or which would affect the remittance of dividends or other payments by us to non-Canadian holders of our common shares or preferred shares, other than withholding tax requirements.

Neither our notice of articles to be in effect upon the completion of this offering nor articles to be in effect upon the completion of this offering contain any change of control limitations with respect to a merger, acquisition or corporate restructuring that involves us.

This summary is not a comprehensive description of relevant or applicable considerations regarding such requirements and, accordingly, is not intended to be, and should not be interpreted as, legal advice to any prospective purchaser and no representation with respect to such requirements to any prospective purchaser is made. Prospective investors should consult their own Canadian legal advisors with respect to any questions regarding securities law in the provinces and territories of Canada.

Actions Requiring a Special Majority

Under our articles, the number of votes required for the corporation to pass a special resolution at a meeting of shareholders is two-third of the votes cast on the resolution. Special resolutions include resolutions to: (i) create

special rights or restrictions for, or attach such special rights or restrictions to, any class or series of shares; (ii) vary or delete any special rights or restrictions attached to any class or series of shares; and (iii) remove a director before the expiration of his or her term of office.

Advance Notice Procedures and Shareholder Proposals

Under the BCBCA, shareholders may make proposals for matters to be considered at the annual general meeting of shareholders. Such proposals must be sent to us in advance of any proposed meeting by delivering a timely written notice in proper form to our registered office in accordance with the requirements of the BCBCA. The notice must include information on the business the shareholder intends to bring before the meeting. In addition, our articles that will be in place after our upcoming annual general meeting of shareholders and prior to the consummation of this offering, require that shareholders must give advance notice to nominate directors or to submit proposals for consideration at shareholders' meetings.

These provisions could have the effect of delaying until the next shareholder meeting the nomination of certain persons for director that are favored by the holders of a majority of our outstanding voting securities.

Ownership and Exchange Controls

There is currently no law, governmental decree or regulation in Canada that restricts the export or import of capital, or which would affect the remittance of dividends, interest or other payments by us to non-resident holders of our common shares, other than withholding tax requirements, as discussed below under "United States and Canadian Income Tax Considerations — Certain Canadian Federal Income Tax Information."

There is currently no limitation imposed by Canadian law or our articles that will be in effect prior to closing on the right of non-residents to acquire, hold or vote our common shares, other than those imposed by applicable securities laws and the Investment Canada Act (Canada). The Investment Canada Act (Canada) will generally not apply except in respect of national security and where control of a Canadian business, which has an enterprise value or assets at or over a certain threshold, is acquired and will not frequently apply to trading generally of securities listed on a stock exchange.

Listing

We intend to apply to list our common shares on the Nasdaq Capital Market under the symbol "XRTX".

Transfer Agent, Registrar and Auditor

Upon the closing of this offering, the transfer agent and registrar for our common shares in the United States will be at its principal office in , and in Canada will be TSX Trust Company at its principal office in Toronto.

Smythe LLP, located at 1700 – 475 Howe Street, Vancouver, British Columbia, Canada V6C 2B3 is our independent registered public accounting firm and has been appointed as our independent auditor.

Pre-Funded Warrants to be Issued as Part of this Offering

Duration and Exercise Price

Each pre-funded warrant offered hereby will have an initial exercise price per share equal to $0.0001. The pre-funded warrants will be immediately exercisable and may be exercised at any time until the pre-funded warrants are exercised in full. The exercise price and number of common shares issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common shares and the exercise price. The pre-funded warrants will be issued separately from the accompanying common warrants, and may be transferred separately immediately thereafter.

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 common shares purchased upon such exercise (except in the case of a cashless exercise as discussed below). Purchasers of the pre-funded warrants in

this offering may elect to deliver their exercise notice following the pricing of the offering and prior to the issuance of the pre-funded warrants at closing to have their pre-funded warrants exercised immediately upon issuance and receive common shares underlying the pre-funded warrants upon closing of this offering. A holder (together with its affiliates) may not exercise any portion of the pre-funded warrant to the extent that the holder would own more than 4.99% of the outstanding common shares immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's pre-funded warrants up to 9.99% of the number common shares outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the pre-funded warrants. Purchasers of pre-funded warrants in this offering may also elect prior to the issuance of the pre-funded warrants to have the initial exercise limitation set at 9.99% of our outstanding common shares. No fractional common shares will be issued in connection with the exercise of a pre-funded warrant. In lieu of fractional shares, we will round down to the next whole share.

Cashless Exercise

If, at the time a holder exercises its pre-funded warrants, a registration statement registering the issuance of the common shares underlying the pre-funded warrants under the Securities Act is not then effective or available, 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 common 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.

Exchange Listing

There is no trading market available for the pre-funded warrants on any securities exchange or nationally recognized trading system. We do not intend to list the pre-funded warrants on any securities exchange or nationally recognized trading system.

Right as a Stockholder

Except as otherwise provided in the pre-funded warrants or by virtue of such holder's ownership of our common 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.

Fundamental Transaction

In the event of a fundamental transaction, as described in the pre-funded warrants and generally including any reorganization, recapitalization or reclassification of our common shares, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common shares, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common shares, the holders of the pre-funded warrants will be entitled to receive upon exercise of the pre-funded warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the pre-funded warrants immediately prior to such fundamental transaction.

Common Share Purchase Warrants to be Issued as Part of this Offering

The following summary of certain terms and provisions of the Common Share Purchase Warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Common Share Purchase 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 Common Share Purchase Warrants for a complete description of the terms and conditions of the Common Share Purchase Warrants.

Duration and Exercise Price

Each Common Share Purchase Warrant included in the units and the pre-funded units offered hereby will have an initial exercise price equal to US$ per share of common stock. The Common Share Purchase Warrants will be immediately exercisable and will expire on the fifth anniversary of the original issuance date. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock and the exercise price. The Common Share Purchase Warrants will be issued separately from the common stock included in the units, or the pre-funded warrants included in the pre-funded units, as the case may be. A Common Share Purchase Warrant to purchase one-half of one share of our common stock will be included in each unit or pre-funded unit purchased in this offering.

Cashless Exercise

If, at the time a holder exercises its Common Share Purchase Warrants, a registration statement registering the issuance of the shares of common stock underlying the Common Share Purchase Warrants under the Securities Act is not then effective or available for the issuance 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 shares of common stock determined according to a formula set forth in the Common Share Purchase Warrants.

Exercisability

The Common Share Purchase 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 shares of our common stock 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 Common Share Purchase Warrant to the extent that the holder would own more than 4.99% of the outstanding common stock immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's Common Share Purchase Warrants up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Common Share Purchase Warrants. Purchasers of Common Share Purchase Warrants in this offering may also elect prior to the issuance of the Common Share Purchase Warrants to have the initial exercise limitation set at 9.99% of our outstanding common stock.

Fractional Shares

No fractional shares of common stock will be issued upon the exercise of the Common Share Purchase Warrants. Rather, the number of shares of common stock to be issued will be rounded to the nearest whole number, or the Company shall pay a cash adjustment in respect of the fractional share.

Transferability

Subject to applicable laws, the Common Share Purchase Warrants may be offered for sale, sold, transferred or assigned without our consent. There is currently no trading market for the Common Share Purchase Warrants.

Exchange Listing

There is no trading market available for the Common Share Purchase Warrants on any securities exchange or nationally recognized trading system. We do not intend to list the Common Share Purchase Warrants on any securities exchange or nationally recognized trading system.

Right as a Stockholders

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

Fundamental Transaction

In the event of a fundamental transaction, as described in the Common Share Purchase Warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common stock, the holders of the Common Share Purchase Warrants will be entitled to receive upon exercise of the Common Share Purchase Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Common Share Purchase Warrants immediately prior to such fundamental transaction.

Options to Purchase Shares

The following table sets forth the aggregate number of options to purchase our common shares upon completion of the offering:

Category	Number of Options to Acquire Common Shares	Exercise Price ($)(1)	Expiration Date
All of Our Executive Officers and All of Our Directors, as a Group (eight in total)	3,850,000	$ 0.23	From March 19, 2023 to January 11, 2026

(1) Represents the weighted-average exercise price of all outstanding options to purchase our common shares, whether vested or unvested.

Prior Sales

The following table summarizes issuances of our common shares and securities convertible or exchangeable into common shares during the 12-month period preceding the date of this Prospectus.

Date of Issuance	Type of Security	Number of Securities Issued	Issuance/ Exercise Price per Security ($)
June 23, 2020	Stock Options	3,150,000	0.14
August 27, 2020	Stock Options	150,000	0.24
January 11, 2021	Stock Options	700,000	0.28
January 12, 2021	Shares	200,000	—
January 13, 2021	Shares	9,821	—
January 13, 2021	Warrants	115,836	0.14
February 1, 2021	Shares	100,000	—
February 4, 2021	Shares	142,857	0.25
February 9, 2021	Shares	24,486,286	0.25
February 9, 2021	Warrants	25,636,566	0.40
February 17, 2021	Shares	56,547	0.14
February 17, 2021	Warrants	59,289	0.14
February 18, 2021	Shares	1,000,000	0.25
February 19, 2021	Shares	150,000	0.25
February 22, 2021	Warrants	66,368	0.25
February 22, 2021	Shares	200,000	0.25
February 22, 2021	Shares	125,657	0.14
February 25, 2021	Shares	2,017,142	0.25
February 26, 2021	Warrants	59,289	0.25
March 1, 2021	Shares	100,000	—
March 1, 2021	Shares	209,289	0.25
March 31, 2021	Shares	100,000	—

SHARES ELIGIBLE FOR FUTURE SALE

Future sales of our common shares in the public market could adversely affect prevailing market prices and could impair our ability to raise equity capital in the future. Sales of substantial numbers of our shares in the public market could adversely affect prevailing market prices of our common shares. While we have applied to list our common shares on the Nasdaq Capital Market, we cannot assure you that a regular trading market will develop in our common shares.

Rule 144

In general, under Rule 144 of the Securities Act as currently in effect, beginning 90 days after the date of this prospectus, an "affiliate" who has beneficially owned our shares for a period of at least six months is entitled to sell within any three-month period a number of shares that does not exceed the greater of either 1% of the then outstanding shares or the average weekly trading volume of our shares on the Nasdaq Capital Market during the four calendar weeks preceding the filing with the SEC of a notice on Form 144 with respect to such sale. Such sales under Rule 144 of the Securities Act are also subject to prescribed requirements relating to the manner of sale, notice and availability of current public information about us.

Under Rule 144, a person who is not deemed to have been an affiliate of ours at any time during the 90 days preceding a sale, and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior holder other than an affiliate, is entitled to sell such shares without restriction, provided we have been in compliance with our reporting requirements under the Exchange Act for 90 days preceding such sale. To the extent that our affiliates sell their shares, other than pursuant to Rule 144 or a registration statement, the purchaser's holding period for the purpose of effecting a sale under Rule 144 commences on the date of transfer from the affiliate. In addition, under Rule 144, any person who is not our affiliate and has not been our affiliate at any time during the preceding three months and has held their shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares without regard to whether current public information about us is available.

Rule 701

In general, under Rule 701 of the Securities Act as currently in effect, each of our employees or directors who acquire our common shares from us in connection with a compensatory stock plan or other written agreement executed prior to the closing of this offering is eligible to resell such shares in reliance on Rule 144, but without compliance with some of the restrictions, including the holding period, contained in Rule 144.

Regulation S

Regulation S provides generally that sales made in offshore transactions are not subject to the registration or prospectus-delivery requirements of the Securities Act.

Canadian Resale Restrictions

Any sale of any of our shares which constitutes a "control distribution" under Canadian securities laws (generally a sale by a person or a group of persons holding more than 20% of the voting rights attached to our outstanding voting securities) will be subject to restrictions under applicable Canadian securities laws in addition to those restrictions noted above, unless the sale is qualified under a prospectus filed with Canadian securities regulatory authorities or if prior notice of the sale is filed with the Canadian securities regulatory authorities at least seven days before any sale and there has been compliance with certain other requirements and restrictions regarding the manner of sale, payment of commissions, reporting and availability of current public information about us and compliance with applicable Canadian securities laws.

Lock-up Agreements

For a description of the lock-up arrangements that we and our shareholders have entered into in connection with this offering, see "Underwriting."

Form S-8 Registration Statement

Following the completion of this offering, we intend to file a registration statement on Form S-8 to register our common shares subject to stock options outstanding as reserved for issuance under our stock option plan. The registration statement with become effective automatically upon filing. Common shares issued upon exercise of a stock option and registered pursuant to the Form S-8 registration statement, subject to vesting provisions, Rule 144 volume limitations applicable to our affiliates, and the lock-up agreements described under "Underwriting", be available for sale in the open market immediately.

TAXATION

The following is, as of the date of this prospectus, a general summary of the principal Canadian federal income tax considerations under the Income Tax Act (Canada), or the Canadian Tax Act, generally applicable to an investor who acquires common shares pursuant to this offering and who, for the purposes of the Canadian Tax Act and at all relevant times, deals at arm's length with the Company and the underwriters, is not affiliated with the Company or the underwriters and who acquires and holds the common shares as capital property, or a Holder. Generally, the common shares will be considered to be capital property to a Holder thereof provided that the Holder does not use the common shares in the course of carrying on a business of trading or dealing in securities and such Holder has not acquired them in one or more transactions considered to be an adventure or concern in the nature of trade.

This summary does not apply to a Holder (i) that is a "financial institution" for the purposes of the mark-to-market rules contained in the Canadian Tax Act; (ii) that is a "specified financial institution" as defined in the Canadian Tax Act; (iii) an interest in which would be a "tax shelter investment" as defined in the Canadian Tax Act; (iv) that has made a functional currency reporting election under the Canadian Tax Act; or (v) that has or will enter into a "derivative forward agreement" or a "synthetic disposition arrangement", as those terms are defined in the Canadian Tax Act, with respect to the common shares. **Such Holders should consult their own tax advisors with respect to the consequences of acquiring common shares**.

Additional considerations, not discussed herein, may be applicable to a Holder that (i) is a corporation resident in Canada and (ii) is (or does not deal at arm's length for the purposes of the Canadian Tax Act with a corporation resident in Canada that is), or becomes as part of a transaction or event or series of transactions or events that includes the acquisition of the common shares, controlled by a corporation that is not resident in Canada for purposes of the "foreign affiliate dumping" rules in section 212.3 of the Canadian Tax Act. **Such Holders should consult their own tax advisors with respect to the consequences of acquiring common shares.**

This summary is based upon the current provisions of the Canadian Tax Act and the regulations thereunder, or the Regulations, in force as of the date hereof and the Company's understanding of the current published administrative and assessing practices of the Canada Revenue Agency, or the CRA. This summary takes into account all specific proposals to amend the Canadian Tax Act and the Regulations publicly announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof, or the Tax Proposals, and assumes that the Tax Proposals will be enacted in the form proposed, although no assurance can be given that the Tax Proposals will be enacted in their current form or at all. This summary does not otherwise take into account any changes in law or in the administrative policies or assessing practices of the CRA, whether by legislative, governmental or judicial decision or action, nor does it take into account or consider any provincial, territorial or foreign income tax considerations, which considerations may differ significantly from the Canadian federal income tax considerations discussed in this summary.

This summary is of a general nature only, is not exhaustive of all possible Canadian federal income tax considerations and is not intended to be, nor should it be construed to be, legal or tax advice to any particular Holder. This summary does not address the deductibility of interest expense incurred or paid by a Holder that has borrowed money in connection with the acquisition of common shares pursuant to this offering. **Holders should consult their own tax advisors with respect to their particular circumstances.**

All amounts in a currency other than the Canadian dollar relevant in computing a Holder's liability under the Canadian Tax Act with respect to the acquisition, holding or disposition of common shares must generally be converted into Canadian dollars using the single daily exchange rate quoted by the Bank of Canada for the day on which the amount arose or such other rate of exchange that is acceptable to the CRA.

Residents of Canada

The following section of this summary applies to a Holder who, for the purposes of the Canadian Tax Act, is or is deemed to be resident in Canada at all relevant times, or a Canadian Resident Holder. Certain Canadian Resident Holders whose common shares might not constitute capital property may in certain circumstances make an irrevocable election permitted by subsection 39(4) of the Canadian Tax Act to deem the common shares, and every other "Canadian security" as defined in the Canadian Tax Act, held by such Canadian Resident Holder, in the taxation year of the election and each subsequent taxation year to be capital property. Canadian Resident Holders should consult their own tax advisors regarding this election.

Dividends

Dividends received or deemed to be received on the common shares will be included in computing a Canadian Resident Holder's income. In the case of an individual (other than certain trusts), such dividends will be subject to the gross-up and dividend tax credit rules normally applicable in respect of "taxable dividends" received from "taxable Canadian corporations" (each as defined in the Canadian Tax Act). An enhanced dividend tax credit will be available to individuals in respect of "eligible dividends" designated by the Company to the Canadian Resident Holder in accordance with the provisions of the Canadian Tax Act.

Dividends received or deemed to be received by a corporation that is a Canadian Resident Holder on the common shares must be included in computing its income but generally will be deductible in computing its taxable income. In certain circumstances, subsection 55(2) of the Canadian Tax Act will treat a taxable dividend received by a Canadian Resident Holder that is a corporation as proceeds of disposition or a capital gain. A Canadian Resident Holder that is a corporation should consult its own tax advisors having regard to its own circumstances. A Canadian Resident Holder that is a "private corporation" as defined in the Canadian Tax Act and certain other corporations controlled, by or for the benefit of an individual (other than a trust) or a related group of individuals (other than trusts) generally will be liable to pay a 381/3% refundable tax under Part IV of the Canadian Tax Act on dividends received or deemed to be received on the common shares to the extent such dividends are deductible in computing taxable income. Such refundable tax will generally be refunded to a corporate Canadian Resident Holder at the rate of 38 1/3% of taxable dividends paid while it is a private corporation.

Dispositions of Common Shares

Upon a disposition (or a deemed disposition) of a common share, a Canadian Resident Holder generally will realize a capital gain (or a capital loss) equal to the amount by which the proceeds of disposition of such common share, net of any reasonable costs of disposition, are greater (or are less) than the adjusted cost base of such common share to the Canadian Resident Holder. The tax treatment of capital gains and capital losses is discussed in greater detail below under the subheading "Capital Gains and Capital Losses."

The adjusted cost base to a Canadian Resident Holder of a common share acquired pursuant to this offering will be averaged with the adjusted cost base of any other of the Company's common shares held by such Canadian Resident Holder as capital property for the purposes of determining the Canadian Resident Holder's adjusted cost base of each common share.

Capital Gains and Capital Losses

Generally, a Canadian Resident Holder is required to include in computing its income for a taxation year one-half of the amount of any capital gain (a "taxable capital gain") realized in the year. Subject to and in accordance with the provisions of the Canadian Tax Act, a Canadian Resident Holder is required to deduct one-half of the amount of any capital loss (an "allowable capital loss") realized in a taxation year from taxable capital gains realized in the year by such Canadian Resident Holder. Allowable capital losses in excess of taxable capital gains may be carried back and deducted in any of the three preceding taxation years or carried forward and deducted in any following taxation year against taxable capital gains realized in such year to the extent and under the circumstances described in the Canadian Tax Act.

The amount of any capital loss realized on the disposition or deemed disposition of common shares by a Canadian Resident Holder that is a corporation may be reduced by the amount of dividends received or deemed to have been received by it on such shares or shares substituted for such shares to the extent and in the circumstances specified by the Canadian Tax Act. Similar rules may apply where a Canadian Resident Holder that is a corporation is a member of a partnership or beneficiary of a trust that owns such shares or that itself is a member of a partnership of a beneficiary of a trust that owns such shares. Canadian Resident Holders to whom these rules may be relevant should consult their own tax advisors.

A Canadian Resident Holder that is throughout the relevant taxation year a "Canadian-controlled private corporation" as defined in the Canadian Tax Act may also be liable to pay an additional refundable tax on its "aggregate investment income" for the year which will include taxable capital gains. The rate of the refundable tax is 10 2/3% for taxation years beginning after 2015. Such refundable tax will generally be refunded to a corporate Canadian Resident Holder at the rate of 38 1/3% of taxable dividends paid while it is a private corporation.

Minimum Tax

Capital gains realized and dividends received by a Canadian Resident Holder that is an individual or a trust, other than certain specified trusts, may give rise to minimum tax under the Canadian Tax Act. Such Canadian Resident Holders should consult their own advisors with respect to the application of minimum tax.

Non-Residents of Canada

The following section of this summary is generally applicable to a Holder who, for the purposes of the Canadian Tax Act, and at all relevant times: (i) has not been and will not be deemed to be resident in Canada; and (ii) does not use or hold the common shares in, or in the course of, carrying on a business, or part of a business, in Canada, each a Non-Canadian Holder. Special rules, which are not discussed in this summary, may apply to a Non-Canadian Holder that is an insurer carrying on business in Canada and elsewhere or that is an "authorized foreign bank" as defined in the Canadian Tax Act. Such a Non-Canadian Holder should consult its own tax advisors.

Dividends

Dividends on the common shares paid or credited or deemed to be paid or credited to a Non-Canadian Holder will be subject to Canadian withholding tax at the rate of 25% on the gross amount of the dividend unless such rate is reduced by the terms of an applicable tax treaty. Under the Canada-United States Income Tax Convention (1980), or the Treaty, as amended, the rate of withholding tax on dividends paid or credited to a Non-Canadian Holder who is resident in the U.S. for purposes of the Treaty, is entitled to the full benefits under the Treaty and beneficially owns the dividend, or a U.S. Holder, is generally limited to 15% of the gross amount of the dividend (or 5% in the case of a U.S. Holder that is a corporation beneficially owning at least 10% of the Company's voting shares). Not all persons who are residents of the U.S. for purposes of the Treaty will qualify for the benefits of the Treaty. Non-Canadian Holders that are resident in the U.S. are advised to consult their tax advisors in this regard. The rate of withholding tax on dividends is also reduced under other bilateral income tax treaties or conventions to which Canada is a signatory.

Dispositions of Common Shares

A Non-Canadian Holder generally will not be subject to tax under the Canadian Tax Act in respect of a capital gain realized on the disposition or deemed disposition of a common share, nor will capital losses arising therefrom be recognized under the Canadian Tax Act, unless the common share constitutes "taxable Canadian property" to the Non-Canadian Holder thereof for purposes of the Canadian Tax Act, and the gain is not exempt from Canadian federal income tax pursuant to the terms of an applicable tax treaty.

Provided the common shares are listed on a "designated stock exchange", as defined in the Canadian Tax Act (which currently includes the TSXV and NYSE), at the time of disposition, the common shares generally will not constitute taxable Canadian property of a Non-Canadian Holder at that time, unless at any time during the 60 month period immediately preceding the disposition the following two conditions are met concurrently: (i) the Non-Canadian Holder, persons with whom the Non-Canadian Holder did not deal at arm's length, partnerships in which the Non-Canadian Holder or persons with whom the Non-Canadian Holder did not deal at arm's length held a membership interest (either directly or indirectly through one or more partnerships), or the Non-Canadian Holder together with all such persons, owned 25% or more of the Company's issued shares of any class or series of the Company's shares; and (ii) more than 50% of the fair market value of such shares was derived directly or indirectly from one, or any combination of, real or immovable property situated in Canada, "Canadian resource properties" (as defined in the Canadian Tax Act), "timber resource properties" (as defined in the Canadian Tax Act) or an option, an interest or right in such property, whether or not such property exists. Notwithstanding the foregoing, a common share may otherwise be deemed to be taxable Canadian property to a Non-Canadian Holder for purposes of the Canadian Tax Act.

Provided that the common shares are listed at the time of their disposition or deemed disposition on a "recognized stock exchange" (which currently includes the TSXV and the NYSE), as defined in the Canadian Tax Act, a Non-Canadian Holder that disposes of common shares that are taxable Canadian property will not be required to satisfy the obligations imposed under section 116 of the Canadian Tax Act and, as such, the purchaser of such shares will not be required to withhold any amount on the purchase price paid. An exemption from such requirements may also be available in respect of such disposition if the common shares are "treaty exempt property," as defined in the Canadian Tax Act.

A Non-Canadian Holder's capital gain (or capital loss) in respect of common shares that constitute or are deemed to constitute taxable Canadian property (and are not "treaty-protected property" as defined in the Canadian Tax Act) will generally be computed and included in income in the manner described above under the subheadings "Residents of Canada—Dispositions of Common Shares" and "Residents of Canada—Capital Gains and Capital Losses".

Non-Canadian Holders whose common shares may be taxable Canadian property should consult their own tax advisors.

Material U.S. Federal Income Tax Considerations for U.S. Holders

The following is a general summary of certain 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 common shares acquired pursuant to this Offering and exercise, disposition, and lapse of Common Share Warrants acquired pursuant to this Offering, the acquisition, ownership, and disposition of the common shares received upon exercise of such Common Share Warrants (the "Warrant Shares"), the ownership, exercise and disposition of pre-funded warrants acquired pursuant to this Offering and the common shares received upon the exercise of such pre-funded warrants (the "Pre-Funded Warrant Shares"). The term "securities" as used in this summary includes the common shares, pre-funded warrants, Common Share Warrants, Warrant Shares and Pre-Funded Warrant Shares, as applicable.

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 as a result of the acquisition of securities 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 specific tax consequences to a U.S. Holder under an applicable 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 net investment income, U.S. federal alternative minimum, 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 the securities. In addition, except as specifically set forth below, this summary does not discuss applicable tax reporting requirements. Each U.S. Holder should consult its own tax advisor regarding the U.S. federal, U.S. federal net investment income, U.S. federal alternative minimum, 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 the securities.

No opinion from legal counsel or ruling from the Internal Revenue Service (the "IRS") has been requested, or will be obtained, regarding the U.S. federal income tax considerations applicable to U.S. Holders as discussed in this summary. This summary is not binding on the IRS, and the IRS is not precluded from taking a position that is different from, and 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 positions taken in this summary.

Scope of this Summary

Authorities

This summary is based on the Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations (whether final, temporary, or proposed) promulgated under the Code, published rulings of the IRS, published administrative positions of the IRS and U.S. court decisions, that are 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 retroactively. 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.

U.S. Holders

For purposes of this summary, the term "U.S. Holder" means a beneficial owner of the securities acquired pursuant to this Offering that is for U.S. federal income tax purposes:

- a citizen or individual 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 United States 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.

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 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 brokers or dealers in securities or currencies or U.S. Holders that are traders in securities that elect to apply a mark-to-market accounting method; (d) have a "functional currency" other than the U.S. dollar; (e) own securities as part of a straddle, hedging transaction, conversion transaction, constructive sale, or other integrated transaction; (f) acquired the securities in connection with the exercise of employee stock options or otherwise as compensation for services; (g) hold the securities other than as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment purposes); (h) are partnerships and other pass-through entities (and investors in such partnerships and entities); (i) are subject to special tax accounting rules; (j) own, 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; (k) are U.S. expatriates or former long-term residents of the U.S.; or (l) are subject to taxing jurisdictions other than, or in addition to, the United States. U.S. Holders that are subject to special provisions under the Code, including U.S. Holders described immediately above, should consult their own tax advisors regarding the U.S. federal, U.S. federal net investment income, U.S. federal alternative minimum, 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 the securities.

If an entity or arrangement that is classified as a partnership for U.S. federal income tax purposes holds the securities, the U.S. federal income tax consequences to such entity or arrangement and the owners of such entity or arrangement generally will depend on the activities of such entity or arrangement and the status of such owners. This summary does not address the tax consequences to any such entity or arrangement or owner. Owners of entities or arrangements that are classified as partnerships for U.S. federal income tax purposes should consult their own tax advisor regarding the U.S. federal income tax consequences arising from and relating to the acquisition, ownership, and disposition of the securities.

U.S. Federal Income Tax Consequences of the Acquisition of a Combination of Common Share or Pre-Funded Warrant and Common Share Warrant

The purchase price for each combination of a common share or pre-funded warrant and of a Common Share Warrant will be allocated between these two components in proportion to their relative fair market values at the time such securities are purchased by the U.S. Holder. This allocation of the purchase price for each such combination will establish a U.S. Holder's initial tax basis for U.S. federal income tax purposes in the common share or pre-funded warrant and of a Common Share Warrant that comprise each such combination. For this purpose, we will allocate $ of the purchase price to the common share or pre-funded warrant and $ of the purchase price for the of a Common Share Warrant.

Treatment of Pre-Funded Warrants

Although it is not entirely free from doubt, we believe a pre-funded warrant should be treated as a separate class of common shares for U.S. federal income tax purposes and a U.S. Holder of pre-funded warrants and Pre-Funded Warrant Shares should generally be taxed in the same manner as a holder of common 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 Pre-Funded Warrant Shares received. Similarly, the tax basis of the pre-funded warrant should carry over to the Pre-Funded Warrant Shares received upon exercise, increased by the exercise price of $0.0001 per share. However, such characterization is not binding on the IRS, and the IRS

may treat the pre-funded warrants as warrants to acquire Common 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" or "Mark-to-Market Election" described below to mitigate PFIC consequences in the event that we are classified as a PFIC. 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 are considered a "passive foreign investment company" within the meaning of Section 1297 of the Code (a "PFIC") at any time during a U.S. Holder's holding period, the following sections will generally describe the potentially adverse U.S. federal income tax consequences to U.S. Holders of the acquisition, ownership, and disposition of the securities.

We believe that we were classified as a PFIC for the tax year ended December 31, 2020. Based on current business plans and financial expectations, we anticipate that we may be a PFIC for the current tax year and future 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, our PFIC status for the current year and future years 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 PFIC determination made by us (or by one of our subsidiaries). Each U.S. Holder should consult its own tax advisor regarding our status as a PFIC and the PFIC status of each non-U.S. subsidiary.

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.

We generally will be a PFIC for any tax year in which (a) 75% or more of our gross income for 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 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, "passive income" does not include any interest, dividends, rents, or royalties that are received or accrued by us from a "related person" (as defined in Section 954(d)(3) of the Code), 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 be deemed to own their proportionate share of any of our subsidiaries which is also a PFIC (a "Subsidiary PFIC"), and will generally be subject to U.S. federal income tax under the "Default PFIC Rules Under Section 1291 of the Code" discussed below on their proportionate share of any (i) distribution on the shares of a Subsidiary PFIC and (ii) disposition or deemed disposition of shares of a Subsidiary PFIC, both as if such U.S. Holders directly held the shares of such Subsidiary PFIC. 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 the securities are made. 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 the securities.

Default PFIC Rules Under Section 1291 of the Code

If we are a PFIC, the U.S. federal income tax consequences to a U.S. Holder of the acquisition, ownership, and disposition of the securities will depend on whether such U.S. Holder makes a "qualified electing fund" or "QEF" election (a "QEF Election") or makes a mark-to-market election under Section 1296 of the Code (a "Mark-to-Market Election") with respect to the common shares, pre-funded warrants, the Warrant Shares or Pre-Funded 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 with respect to (a) any gain recognized on the sale or other taxable disposition of the securities and (b) any excess distribution received on the securities. 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 securities, if shorter).

Under Section 1291 of the Code, any gain recognized on the sale or other taxable disposition of the securities of a PFIC (including an indirect disposition of shares of a Subsidiary PFIC), and any excess distribution received on such securities (or a distribution by a Subsidiary PFIC to its shareholder that is deemed to be received by a U.S. Holder) must be ratably allocated to each day in a Non-Electing U.S. Holder's holding period for the securities. 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 the securities, it will continue to be treated as a PFIC with respect to such Non-Electing U.S. Holder, regardless of whether it ceases 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 the common shares, pre-funded warrants, Warrant Shares and the Pre-Funded Warrant Shares by electing to recognize gain (which will be taxed under the rules of Section 1291 of the Code as discussed above) as if such securities 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 Common Share 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 *Common Share* 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 related Common Share Warrant. 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 the Warrant Shares*,* common shares *and pre-funded warrants* under the PFIC rules and the applicable elections differently.

QEF Election

A U.S. Holder that makes a QEF Election for the first tax year in which its holding period of its common 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 common shares or pre-funded warrants. However, a U.S. Holder that makes a 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 QEF Election generally (a) may receive a tax-free distribution from us to the extent that such distribution represents "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 common 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 common 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 common shares or pre-funded warrants in which we were 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 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 Common Share 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 the common shares or pre-funded warrants 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 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 Shares acquired upon the exercise of the Common Share Warrants for purposes of the PFIC rules. In addition, gain recognized on the sale or other taxable disposition (other than by exercise) of the Common Share 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 securities.

Upon the exercise of a pre-funded warrant, a U.S. Holder may be required to make a new QEF Election with respect to the Pre-Funded Warrant Shares received. Each U.S. Holder should consult its own tax advisor regarding the application of the QEF Election rules to the pre-funded warrants and Pre-Funded Warrant Shares.

U.S. Holders should be aware that, for each tax year, if any, that we are a PFIC, we can provide no assurances that we will satisfy the record keeping requirements of a PFIC, or that we will make available to U.S. Holders the information such U.S. Holders require to make a QEF Election with respect to us or any Subsidiary PFIC, and as a result, a QEF Election may not be available to U.S. Holders. U.S. Holders should consult with their own tax advisors regarding the potential application of the PFIC rules to the ownership and disposition of the securities, and the availability of certain U.S. tax elections under the PFIC rules.

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 U.S. 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 the common shares, Warrant Shares and Pre-Funded Warrant Shares only if such shares are marketable stock. The common shares, Warrant Shares and Pre-Funded Warrant Shares generally will be "marketable stock" if the common shares, Warrant Shares and Pre-Funded 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 U.S. 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 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 ensure active trading of listed stocks. If such stock is traded on such a qualified exchange or other market, such stock generally will be considered "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. Provided that the common shares, Warrant Shares and Pre-Funded Warrant Shares are "regularly traded" as described in the preceding sentence, such shares are expected to be marketable stock. There can be no assurance that the common shares will be "regularly traded" in subsequent calendar quarters. U.S. Holders should consult their own tax advisors regarding the marketable stock rules. A Mark-to-Market Election will likely not be available with respect to the Common Share Warrants and pre-funded warrants.

A U.S. Holder that makes a Mark-to-Market Election with respect to its common shares or pre-funded warrants generally will not be subject to the rules of Section 1291 of the Code discussed above with respect to such common shares or pre-funded warrants. 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 common shares or pre-funded warrants 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 common shares or pre-funded warrants.

Any Mark-to-Market Election made by a U.S. Holder for the common shares or pre-funded warrants will also apply to such U.S. Holder's Warrant Shares and Pre-Funded Warrant Shares. As a result, if a Mark-to-Market Election has been made by a U.S. Holder with respect to its common 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 Common Share 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 securities. 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. 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 common shares, pre-funded warrants, and any Warrant Shares or Pre-Funded Warrant Shares, as of the close of such tax year over (b) such U.S. Holder's tax basis in such securities. 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 (i) such U.S. Holder's adjusted tax basis in the common shares, pre-funded warrants and any Warrant Shares or Pre-Funded Warrant Shares, over (ii) the fair market value of such securities (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 common shares, pre-funded warrants, Warrant Shares and Pre-Funded 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 such securities, 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).

A U.S. Holder makes a Mark-to-Market Election by attaching a completed IRS Form 8621 to a timely filed U.S. federal income tax return. A timely 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 securities cease to be "marketable stock" or the IRS consents to revocation of such election. Each U.S. Holder should consult its own tax advisor 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 common shares, pre-funded warrants, Warrant Shares and Pre-Funded 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 securities 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 the securities 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.

Certain additional adverse rules will 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 the securities as security for a loan will, except as may be provided in Treasury Regulations, be treated as having made a taxable disposition of such securities.

In addition, a U.S. Holder who acquires securities from a decedent will not receive a "step up" in tax basis of such securities to fair market value.

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 their own tax advisor 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 advisor regarding the PFIC rules (including the applicability and advisability of a QEF Election and 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 the securities.

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

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

Exercise of Common Share Warrants

A U.S. Holder should not recognize gain or loss on the exercise of a Common Share 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 Common Share 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 Common Share Warrant. It is unclear whether a U.S. Holder's holding period for the Warrant Share received on the exercise of a Common Share Warrant would commence on the date of exercise of the Common Share Warrant or the day following the date of exercise of the Common Share 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 Common Share Warrant.

Disposition of Common Share Warrants

A U.S. Holder will recognize gain or loss on the sale or other taxable disposition of a Common Share 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 Common Share 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 Common Share Warrant is held for more than one year. Deductions for capital losses are subject to complex limitations under the Code.

Expiration of Common Share Warrants Without Exercise

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

Certain Adjustments to the Common Share Warrants

Under Section 305 of the Code, an adjustment to the number of Warrant Shares that will be issued on the exercise of the Common Share Warrants, or an adjustment to the exercise price of the Common Share Warrants, may be treated as a constructive distribution to a U.S. Holder of the Common Share 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 Common Share 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 Common Share 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 the Common Shares, Pre-Funded Warrants, Warrant Shares and Pre-Funded Warrant Shares" below).

General Rules Applicable to U.S. Federal Income Tax Consequences of the Acquisition, Ownership, and Disposition of the Common Shares, Pre-Funded Warrants, Warrant Shares and Pre-Funded Warrant Shares

The following discussion describes the general rules applicable to the ownership and disposition of the common shares, pre-funded warrants, Warrant Shares and Pre-Funded Warrant Shares, but is subject in its entirety to the special rules described above under the heading "Passive Foreign Investment Company Rules."

Distributions on the Common Shares, Pre-Funded Warrants, Warrant Shares and Pre-Funded Warrant Shares.

A U.S. Holder that receives a distribution, including a constructive distribution, with respect to a common share, pre-funded warrant, Warrant Share or Pre-Funded Warrant Share (as well as any constructive distribution on a Common Share Warrant as described above) 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 and accumulated "earnings and profits", as computed under U.S. federal income tax principles. 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 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 such securities and thereafter as gain from the sale or exchange of such securities (see "Sale or Other Taxable Disposition of the Common Shares, Pre-Funded Warrants, Warrant Shares and/or Pre-Funded Warrant Shares" below). However, we may not maintain the calculations of earnings and profits in accordance with U.S. federal income tax principles, and each U.S. Holder may be required to assume that any distribution by us with respect to such securities will constitute ordinary dividend income. Dividends received on such securities 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 Convention Between Canada and the United States of America with Respect to Taxes on Income and on Capital, signed September 26, 1980, as amended, or the common shares are readily tradable on a United States securities market, dividends paid by us to non-corporate U.S. Holders, including individuals, 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 advisor regarding the application of such rules.

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

Upon the sale or other taxable disposition of the common shares, pre-funded warrants, Warrant Shares or Pre-Funded Warrant Shares, a U.S. Holder generally will recognize capital gain or loss in an amount equal to the difference 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 such securities 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, such securities 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 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 Tax 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 the securities 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). If the foreign currency received is not converted into U.S. dollars on the date of receipt, 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 receives payment in foreign currency and engages in a subsequent conversion or other disposition of the foreign currency 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 advisor regarding the U.S. federal income tax consequences of receiving, owning, and disposing of foreign currency.

Foreign Tax Credit

Subject to the PFIC rules discussed above, a U.S. Holder that pays (whether directly or through withholding) Canadian income tax with respect to dividends paid on the securities (or with respect to any constructive dividend on the Common Share 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 paid. 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 subject to U.S. federal income tax. This election is made on a year-by-year basis and applies to all foreign taxes paid or accrued (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 tax advisor regarding the foreign tax credit rules.

Information Reporting; Backup Withholding Tax

Under U.S. federal income tax laws 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 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. U. S. Holders may be subject to these reporting requirements unless the securities 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 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 the securities generally may be subject to information reporting and backup withholding tax, currently at the rate of 24%, if a U.S. Holder (a) fails to furnish its correct U.S. taxpayer identification number (generally on 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 it 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, such as U.S. Holders that are corporations, generally are excluded from these information reporting and backup withholding tax rules. 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 THE SECURITIES. U.S. HOLDERS SHOULD CONSULT THEIR OWN TAX ADVISORS AS TO THE TAX CONSIDERATIONS APPLICABLE TO THEM IN THEIR OWN PARTICULAR CIRCUMSTANCES.

UNDERWRITING

A.G.P./Alliance Global Partners is acting as the representative of the underwriters and the sole book-running manager in this offering. We have entered into an underwriting agreement dated , 2021 with the representative. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to each underwriter named below and each underwriter named below has severally and not jointly agreed to purchase from us, at the respective public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, our common shares, pre-funded warrants and Common Share Purchase Warrants listed next to its name in the following table:

Underwriter	Number of Shares	Number of Pre-Funded Warrants	Number of Common Share Purchase Warrants	Total
A.G.P./Alliance Global Partners				
Total				

The underwriters are committed to purchase all the securities we are offering other than those covered by the over-allotment option to purchase additional securities described below, if they purchase any common shares, pre-funded warrants or Common Share Purchase Warrants. The obligations of the underwriters may be terminated upon the occurrence of certain events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the underwriters' obligations are subject to customary conditions and representations and warranties contained in the underwriting agreement, such as receipt by the underwriters of officers' certificates and legal opinions.

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the common shares, pre-funded warrants or Common Share Purchase Warrants, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Over-allotment Option to Purchase Additional Securities

Pursuant to the underwriting agreement, we have granted the underwriters an option, exercisable for up to days from the date of this prospectus, to purchase up to additional common shares and/or pre-funded warrants and accompanying Common Share Purchase Warrants (15% of the common shares and/or pre-funded warrants and accompanying Common Share Purchase Warrants sold in this offering) at the public offering price set forth on the cover page hereto, less the underwriting discounts and commissions. The underwriters may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional common shares and/or pre-funded warrants and accompanying Common Share Purchase Warrants are purchased pursuant to the over-allotment option, the underwriters will offer these common shares and/or pre-funded warrants and accompanying Common Share Purchase Warrants on the same terms as those on which the other securities are being offered. If this over-allotment option is exercised in full, the total gross proceeds will be approximately $ million and the total net proceeds, after expenses, to us will be approximately $ million.

Discounts, Commissions and Expense Reimbursement

The following table shows the public offering price, underwriting discount and proceeds, before expenses, to us. The information assumes either no exercise or full exercise by the underwriters of their over-allotment option to purchase additional securities.

	Per Share and accompanying Common Share Purchase Warrants	Per Pre-Funded Warrant and accompanying Common Share Purchase Warrants	Total Without Over-Allotment	Total With Over-Allotment
Public offering price				
Underwriting discounts and commissions (7%)				
Proceeds, before expenses, to us				

The underwriters propose to offer the common shares and/or pre-funded warrants and accompanying Common Share Purchase Warrants offered by us to the public at the public offering price per respective common share and/or pre-funded warrant and accompanying Common Share Purchase Warrants set forth on the cover of this prospectus. In addition, the underwriters may offer some of the common shares and/or pre-funded warrants and accompanying Common Share Purchase Warrants to other securities dealers at such price less a concession of up to $ per common share and accompanying Common Share Purchase Warrants and $ per pre-funded warrant and accompanying Common Share Purchase Warrants.

If all of the common shares and/or pre-funded warrants and accompanying Common Share Purchase Warrants offered by us are not sold at the respective public offering prices per common share and accompanying Common Share Purchase Warrants and pre-funded warrant and accompanying Common Share Purchase Warrants, the underwriters may change the offering price per common share and accompanying Common Share Purchase Warrants and pre-funded warrant and accompanying Common Share Purchase Warrants and other selling terms by means of a supplement to this prospectus.

We have also agreed to reimburse certain of the representative's accountable expenses not to exceed $80,000 in the aggregate, and non-accountable expenses not to exceed 1% of the aggregate gross proceeds of this offering.

We estimate that the total expenses of the offering payable by us, excluding the total underwriting discounts, commissions and underwriter expense reimbursement, will be approximately $ million.

Lock-Up Agreements

For a period of 90 days after the date of this prospectus, subject to certain exceptions, we have agreed with the underwriters not to offer for sale, issue or sell, or register for offer or sale, any of our common shares or any other shares of our capital stock or file or cause to be filed with the SEC any registration statement relating to the offering of any of our securities. In addition, all of our directors and executive officers have entered into lock-up agreements with the representative prior to the commencement of this offering pursuant to which each of these persons, for a period of 90 days from the closing date of this offering, without the prior written consent of the representative, agree not to (1) offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of, or announce the intention to otherwise dispose of, any of our common shares or any securities convertible into or exercisable or exchangeable for our common shares whether now owed or hereafter acquired or with respect to which the director or executive officer has or hereafter acquires the power of disposition; (2) enter into any swap, hedge or similar agreement or arrangement that transfers in whole or in part, the economic risk of ownership of such securities; or (3) engage in any short selling of such securities.

Underwriter Warrants

Upon closing of this offering, we will issue to A.G.P. a compensation warrant entitling A.G.P. or its designees to purchase shares of our common shares (equal to up to % of the aggregate number of the common shares and common shares issuable upon exercise of the pre-funded warrants that we issue in this offering), subject to any reductions necessary to comply with the rules and regulations of the Financial Industry Regulatory Authority, Inc., or FINRA.

This warrant will be exercisable at any time and from time to time, in whole or in part, during the four and one-half year period commencing six months from the effective date of the registration statement of which this prospectus forms a part. The warrant will provide for registration rights for the shares underlying the warrant, pursuant to FINRA Rule 5110(f)(2)G), including a one-time demand registration right and piggyback rights for period of not more than seven years, as well as contain customary anti-dilution provisions. Pursuant to FINRA Rule 5110(g), the underwriter warrants and any shares issued upon exercise of the underwriter warrants shall not be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of this offering, except the transfer of any security: (i) by operation of law or by reason of our reorganization; (ii) to any FINRA member firm participating in the offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction set forth above for the remainder of the time period; (iii) if the aggregate amount of our securities held by the underwriter or related persons do not exceed 1% of the securities being offered; (iv) that is beneficially owned on a pro rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund and the participating members in the aggregate do not own more than 10% of the equity in the fund; or (v) the exercise or conversion of any security, if all securities remain subject to the lock-up restriction set forth above for the remainder of the time period.

Right of First Refusal

Subject to certain conditions, we granted the representative, for a period of nine months after the date of the consummation of our business combination, a right of first refusal to act as sole investment banker, sole book-runner, and/or sole placement agent, at the representative's sole discretion, for each and every future public and private equity and debt offering, including all equity linked financings for us or any of our successors or subsidiaries. In accordance with FINRA Rule 5110(g)(6)(A), such right of first refusal shall not have a duration of more than three years from the effective date of the registration statement of which this prospectus forms a part.

Electronic Offer, Sale and Distribution of Securities

A prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representative may agree to allocate a number of Units and Pre-funded Units to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of, nor incorporated by reference into, this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

The Nasdaq Capital Market Listing and TSX Listing

We have applied to list our common shares on the Nasdaq Capital Market the proposed symbol "XRTX" and on the TSXV under the trading symbol " ". We do not intend to apply for listing of the pre-funded warrants or the Common Share Purchase Warrants on any securities exchange or other nationally recognized trading system.

Stabilization

In connection with this offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate-covering transactions, penalty bids and purchases to cover positions created by short sales. Stabilizing transactions permit bids to purchase shares so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the shares while the offering is in progress.

Over-allotment transactions involve sales by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase. This creates a syndicate short position that may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares in the over-allotment option. In a naked short position, the number of

shares involved is greater than the number of shares in the over-allotment option. The underwriters may close out any short position by exercising their option to purchase additional common shares and accompanying Common Share Purchase Warrants or pre-funded warrants and accompanying Common Share Purchase Warrants and/or purchasing common shares and accompanying Common Share Purchase Warrants or pre-funded warrants and accompanying Common Share Purchase Warrants in the open market.

Syndicate covering transactions involve purchases of shares in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared with the price at which they may purchase shares through exercise of the over-allotment option. If the underwriters sell more shares than could be covered by exercise of the over-allotment option and, therefore, have a naked short position, the position can be closed out only by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be downward pressure on the price of the shares in the open market that could adversely affect investors who purchase in the offering.

Penalty bids permit the representative to reclaim a selling concession from a syndicate member when the shares originally sold by that syndicate member are purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common shares or preventing or retarding a decline in the market price of our common shares. As a result, the price of our common shares in the open market may be higher than it would otherwise be in the absence of these transactions. 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 our common shares. These transactions may be effected on the Nasdaq Capital Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Passive Market Making

In connection with this offering, underwriters and selling group members may engage in passive market making transactions in our common shares on the Nasdaq Capital Market in accordance with Rule 103 of Regulation M under the Exchange Act, during a period before the commencement of offers or sales of the shares and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, then that bid must then be lowered when specified purchase limits are exceeded.

Certain Relationships

The underwriters and their affiliates have in the past and may in the future provide various investment banking, commercial banking, financial advisory, brokerage, and other services to us and have and may receive customary fees and expense reimbursement.

The underwriters and their affiliates may, from time to time, engage in transactions with and perform services for us in the ordinary course of their business for which they may receive customary fees and reimbursement of expenses. In the ordinary course of their various business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own accounts and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of our company. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Offer Restrictions Outside the United States

This prospectus does not constitute an offer to sell to, or a solicitation of an offer to buy from, anyone in any country or jurisdiction (i) in which such an offer or solicitation is not authorized, (ii) in which any person making such offer or solicitation is not qualified to do so or (iii) in which any such offer or solicitation would otherwise be unlawful. No action has been taken that would, or is intended to, permit a public offer of the securities or possession

or distribution of this prospectus or any other offering or publicity material relating to the securities in any country or jurisdiction (other than the United States) where any such action for that purpose is required. Accordingly, the underwriter has undertaken that it will not, directly or indirectly, offer or sell any securities offered hereby or have in its possession, distribute or publish any prospectus, form of application, advertisement or other document or information in any country or jurisdiction except under circumstances that will, to the best of its knowledge and belief, result in compliance with any applicable laws and regulations and all offers and sales of securities by it will be made on the same terms.

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any securities may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any securities may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to legal entities which are qualified investors as defined under the Prospectus Directive;
- by the underwriters to fewer than 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives of the underwritesr for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of our common stock shall result in a requirement for us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, (1) the expression an "offer of common stock to the public" in relation to any common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any securities to be offered so as to enable an investor to decide to purchase or subscribe for the common stock, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State, (2) the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive), and includes any relevant implementing measure in each Relevant Member State and (3) the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

This prospectus has only been communicated or caused to have been communicated and will only be communicated or caused to be communicated as an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act of 2000 (the "FSMA")) as received in connection with the issue or sale of the common stock in circumstances in which Section 21(1) of the FSMA does not apply to us. All applicable provisions of the FSMA will be complied with in respect to anything done in relation to the common stock in, from or otherwise involving the United Kingdom.

Canada

The securities may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001, or the Corporations Act, and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the securities may only be made to persons, or the Exempt Investors, who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the securities without disclosure to investors under Chapter 6D of the Corporations Act.

The securities applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring securities must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances and, if necessary, seek expert advice on those matters.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, or the securities have been or will be filed with or approved by any Swiss regulatory authority. This document will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority, or DFSA. This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents relating to Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The securities to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this prospectus, you should consult an authorized financial advisor.

Hong Kong

The securities have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the securities has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus may be distributed only to, and is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds; provident funds; insurance companies; banks; portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange Ltd., underwriters, each purchasing for their own account; 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. Qualified investors shall be required to submit written confirmation that they fall within the scope of the Addendum.

EXPENSES RELATED TO THIS OFFERING

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the offer and sale of our common shares in this offering. All amounts listed below are estimates except the SEC registration fee and FINRA filing fee.

Itemized expense	**Amount**
SEC registration fee	$
Canadian securities regulatory filing fees	
Nasdaq listing fee	
FINRA filing fee	
Printing and engraving expenses	
Transfer agent and registrar fees	
Legal fees and expenses	
Accounting fees and expenses	
Public Relations fees	$
Total	

LEGAL MATTERS

The validity of the securities being offered by this prospectus and other legal matters concerning this offering relating to Canadian law will be passed upon for us by McCarthy Tétrault LLP. Certain legal matters in connection with this offering relating to U.S. law will be passed upon for us by Dorsey & Whitney LLP. Certain legal matters in connection with this offering relating to Canadian law will be passed upon for the underwriters by TingleMerrett LLP. Certain legal matters in connection with this offering relating to U.S. law will be passed upon for the underwriters by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., New York, New York.

EXPERTS

The consolidated financial statements of XORTX Therapeutics Inc. as of and for the year ended December 31, 2020, have been audited by Smythe LLP, independent registered public accounting firm, as set forth in their report thereon. Smythe LLP is independent with respect to us within the meaning of the Rules of Professional Conduct of the Institute of Chartered Professional Accountants of British Columbia and under all relevant U.S. professional and regulatory standards, including PCAOB Rule 3520. We have included our financial statements in this prospectus and in this registration statement in reliance on the report of Smythe LLP given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form F-1 under the Securities Act, including relevant exhibits and schedules, with respect to the securities to be sold in this offering. This prospectus, which constitutes a part of the registration statement, does not contain all of the information contained in the registration statement. You should read the registration statement and its exhibits for further information with respect to us and the securities. Some of these exhibits consist of documents or contracts that are described in this prospectus in summary form. You should read the entire document or contract for the complete terms. You may read and copy the registration statement and its exhibits at the SEC's Public Reference Room 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 the SEC at 1-800-SEC-0330. In addition, the SEC maintains an internet website at www.sec.gov, from which you can electronically access the registration statement and its exhibits.

After this offering, we will be subject to the reporting requirements of the Exchange Act applicable to foreign private issuers. As a foreign private issuer, the SEC's rules do not require us to deliver proxy statements or to file quarterly reports on Form 10-Q, among other things. However, we plan to produce quarterly financial reports and furnish them to the SEC not later than 45 days after the end of each of the first three quarters of our fiscal year and to file our annual report on Form 20-F not later than 90 days after the end of our fiscal year. In addition, our "insiders" are not subject to the SEC's rules regarding insider reporting and prohibiting short-swing trading under Section 16 of the Exchange Act.

We will also be subject to the full informational requirements of the securities commissions in Alberta, British Columbia, and Ontario. You are invited to read and copy any reports, statements or other information, other than confidential filings, that we intend to file with the Canadian provincial and territorial securities commissions. These filings are also electronically available from the Canadian System for Electronic Document Analysis and Retrieval (SEDAR) (http://www.sedar.com), the Canadian equivalent of the SEC's Electronic Document Gathering And Retrieval System. Documents filed on SEDAR are not, and should not be considered, part of this prospectus.

We also maintain a website at www.xortx.com. Information contained in, or accessible through, our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION

Insofar as indemnification for liabilities arising under the Securities Act, may be permitted to our directors, officers or persons controlling us, we have been advised that it is the SEC's opinion that such indemnification is against public policy as expressed in such act and is, therefore, unenforceable.

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XORTX Therapeutics Inc.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and board of directors of XORTX Therapeutics Inc.

Opinion
We have audited the consolidated financial statements of XORTX Therapeutics Inc. (the "Company"), which comprise:

- the consolidated statements of financial position as at December 31, 2020 and 2019;
- the consolidated statements of loss and comprehensive loss for the years then ended;
- the consolidated statements of changes in shareholders' equity (deficiency) for the years then ended;
- the consolidated statements of cash flows for the years then ended; and
- the notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as at December 31, 2020 and 2019, and its consolidated financial performance and consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards ("IFRS").

Basis for Opinion
We conducted our audits in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our opinion.

Material Uncertainty Related to Going Concern
We draw attention to Note 1 in the consolidated financial statements, which indicates that the Company incurred a net loss of $1,284,602 during the year ended December 31, 2020 and, as of that date, had an accumulated deficit of $8,037,998. As stated in Note 1, these events or conditions, along with other matters as set forth in Note 1, indicate that a material uncertainty exists that may cast significant doubt on the Company's ability to continue as a going concern. Our opinion is not modified in respect of this matter.

Other Information
Management is responsible for the other information. The other information comprises Management's Discussion and Analysis.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

We obtained Management's Discussion and Analysis prior to the date of this auditors' report. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements
Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements. As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

The engagement partner on the audit resulting in this independent auditors' report is Kevin Kwan.

Chartered Professional Accountants
Vancouver, British Columbia
April 23, 2021

XORTX THERAPEUTICS INC.
Consolidated Statements of Financial Position
(Expressed in Canadian Dollars)

	Note	December 31, 2020	December 31 2019
		$	$
Assets			
Current			
Cash		171,271	58,614
Funds held in trust		—	70,000
Deposits	**5**	1,826,404	656,324
Accounts receivable and other	**6**	58,466	15,468
Deferred share issuance costs		—	14,842
		2,056,141	815,248
Non-current			
Equipment		—	341
Intangible assets	**7**	234,316	272,388
Total Assets		**2,290,457**	**1,087,977**
Liabilities			
Current			
Accounts payable and accrued liabilities	**8,12**	1,034,213	1,151,475
Provision for patent acquisition	**9**	—	97,410
Liability component on convertible loans	**10**	—	50,813
Total Liabilities		1,034,213	1,299,698
Shareholders' Equity (Deficiency)			
Share capital	**11**	8,258,395	5,863,872
Share-based payments, warrant reserve and other	**11**	1,003,609	607,803
Obligation to issue shares	**7(c)**	32,238	—
Share subscriptions received in advance	**11(b)**	—	70,000
Equity component on convertible loans	**10**	—	5,202
Deficit		(8,037,998)	(6,758,598)
Total Shareholders' Equity (Deficiency)		1,256,244	(211,721)
Total Liabilities and Shareholders' Equity (Deficiency)		**2,290,457**	**1,087,977**

Nature of Operations and Going Concern (Note 1)
Commitments (Note 16)
Subsequent events (Note 17)

/s/ "Allen Davidoff"
Director

/s/ "Paul Van Damme"
Director

The accompanying notes are an integral part of these consolidated financial statements.

XORTX THERAPEUTICS INC.
Consolidated Statements of Comprehensive Loss
For the years ended December 31, 2020 and 2019
(Expressed in Canadian Dollars)

	Note	2020	2019
		$	$
Expenses			
Amortization	**7**	20,439	19,900
Consulting	**12**	102,880	46,561
General and administrative		9,516	17,344
Investor relations		241,177	34,782
Listing fees		52,138	42,495
Professional fees	**12**	162,580	108,427
Research and development		277,455	39,897
Share-based payments	**11(f), 12**	293,443	26,317
Travel		8,460	36,076
Wages and benefits	**12**	227,905	194,166
Loss before other items		(1,395,993)	(565,965)
Accretion		(846)	(1,638)
Foreign exchange gain (loss)		2,961	(26,397)
Interest and other expenses		(12,666)	(35,576)
Impairment of intangible assets	**7**	(64,562)	—
Recovery of provision for patent acquisition	**9**	95,490	—
Forgiveness of debt	**5,10**	91,014	—
Net loss and comprehensive loss for the year		(1,284,602)	(629,576)
Basic and diluted loss per common share		(0.02)	(0.01)
Weighted average number of common shares outstanding			
Basic and diluted		78,235,658	62,919,691

The accompanying notes are an integral part of these consolidated financial statements.

XORTX THERAPEUTICS INC.
Consolidated Statements of Changes in Shareholders' Equity (Deficiency)
For the years ended December 31, 2020 and 2019
(Expressed in Canadian Dollars)

	Note	Number of common shares	Share capital	Reserves	Obligation to issue shares	Share subscriptions received in advance	Equity component on convertible loans	Deficit	Total
		$	$	$	$	$	$	$	$
Balance, December 31, 2018		62,919,691	5,863,872	581,486	—	—	5,202	(6,129,022)	321,538
Share-based payments	11(f)	—	—	26,317	—	—	—	—	26,317
Share subscriptions received in advance	11(b)	—	—	—	—	70,000	—	—	70,000
Net loss for the year		—	—	—	—	—	—	(629,576)	(629,576)
Balance, December 31, 2019		62,919,691	5,863,872	607,803	—	70,000	5,202	(6,758,598)	(211,721)
Shares issued pursuant to private placement	11(b)	18,259,427	2,465,023	91,297	—	(70,000)	—	—	2,486,320
Share issuance costs	11(b)	—	(70,500)	11,066	—	—	—	—	(59,434)
Convertible loan debt forgiveness		—	—		—	—	(5,202)	5,202	—
Obligation to issue shares	7(c)	—	—	—	32,238	—	—	—	32,238
Share-based payments	11(f)	—	—	293,443	—	—	—	—	293,443
Net loss for the year		—	—	—	—	—	—	(1,284,602)	(1,284,602)
Balance, December 31, 2020		81,179,118	8,258,395	1,003,609	32,238	—	—	(8,037,998)	1,256,244

The accompanying notes are an integral part of these consolidated financial statements.

XORTX THERAPEUTICS INC.
Consolidated Statements of Cash Flows
For the years ended December 31, 2020 and 2019
(Expressed in Canadian Dollars)

	Note	2020 $	2019 $
Cash provided by (used in):			
Operating activities		(1,284,602)	(629,576)
Net loss for the year			
Items not affecting cash:			
Accretion expense		846	1,638
Amortization		20,439	19,900
Forgiveness of debt	**5,10**	(91,014)	—
Share-based payments	**11(e)**	293,443	26,317
Unrealized foreign exchange loss		1,201	34,064
Impairment of intangible assets	**7**	64,562	—
Recovery of provision	**9**	(95,490)	—
Changes in non-cash operating assets and liabilities:			
Funds held in trust	**11(b)**	—	(70,000)
Accounts payable and accrued liabilities		405,212	353,289
Accounts receivable and other		(42,998)	14,788
		(728,401)	(249,580)
Investing activities			
Acquisition of intangibles assets		(14,350)	(7,037)
		(14,340)	(7,037)
Financing activities			
Proceeds from issuance of shares	**11(b)**	900,000	—
Cash share issuance costs	**11(b)**	(44,592)	—
Deferred share issuance costs		—	(14,788)
Share subscriptions received in advance	**11(b)**	—	70,000
		855,408	55,212
Increase (decrease) in cash		112,657	
Cash, beginning of year		58,614	260,019
Cash, end of year		171,271	58,614
Supplemental Cash Flow and Non-Cash Investing and Financing Activities Disclosure			
Cash paid for interest		—	—
Cash paid for income taxes		—	—
Transfer of funds held in trust		70,000	—
Shares issued for deposit		1,606,320	—
Shares issued to settle debt		50,000	—
Obligation to issue shares		32,238	—
Application of Cato deposit against payable	**5**	436,240	—

The accompanying notes are an integral part of these consolidated financial statements.

1. Nature of operations and going concern

XORTX Therapeutics Inc. (the "Company" or "XORTX") was incorporated under the laws of Alberta, Canada on August 24, 2012 under the name ReVasCor Inc. and was continued under the Canada Business Corporations Act on February 27, 2013 under the name of XORTX Pharma Corp. Upon completion of the reverse take-over ("RTO") transaction on January 10, 2018 with APAC Resources Inc. ("APAC"), a company incorporated under the laws of British Columbia, the Company changed its name to "XORTX Therapeutics Inc." and XORTX Pharma Corp. became a wholly-owned subsidiary.

XORTX is a public company listed on the Canadian Securities Exchange (the "CSE") under the symbol "XRX", and the OTCQB Venture Market under the symbol "XRTXF". The Company's operations and mailing address is Suite 4000, 421 - 7th Avenue SW, Calgary, Alberta, T2P 4K9 and its head and registered address is located at Suite 2400, 745 Thurlow Street, Vancouver, British Columbia, V6E 0C5.

XORTX is a bio-pharmaceutical company, dedicated to the development and commercialization of therapies to treat progressive kidney disease modulated by aberrant purine and uric acid metabolism in orphan disease indications such as autosomal dominant polycystic kidney disease, larger market type 2 diabetic nephropathy, and fatty liver disease. The Company's current focus is on developing products to slow and/or reverse the progression of kidney disease in patients at risk of end stage kidney failure.

Although there is no certainty, management is of the opinion that additional funding for future projects and operations can be raised as needed. The Company is subject to a number of risks associated with the successful development of new products and their marketing and the conduct of its clinical studies and their results. The Company will have to finance its research and development activities and its clinical studies. To achieve the objectives in its business plan, the Company plans to raise the necessary capital and to generate revenues. The products developed by the Company will require approval from the U.S. Food and Drug Administration and equivalent organizations in other countries before their sale can be authorized. If the Company is unsuccessful in obtaining adequate financing in the future, research activities will be postponed until market conditions improve. These circumstances and conditions may cast significant doubt about the Company's ability to continue as a going concern.

In March 2020, the World Health Organization declared coronavirus COVID-19 a global pandemic. This contagious disease outbreak, which has continued to spread, and any related adverse public health developments, have adversely affected workforces, economies, and financial markets globally, potentially leading to an economic downturn. It is not possible for the Company to predict the duration or magnitude of the adverse results of the outbreak and its effects on the Company's business or results of operations at this time but may impact the Company's ability to obtain additional financing to support future research projects.

2. Basis of preparation

Statement of Compliance

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") .

Basis of Measurement and Presentation

These consolidated financial statements have been prepared using the historical cost convention using the accrual basis of accounting except for financial instruments which have been measured at fair value. In the opinion of management, all adjustments (including normal recurring accruals), considered necessary for a fair presentation have been included. The accounting policies set out below have been applied consistently to all years presented in these consolidated financial statements.

2. Basis of preparation (continued)

Basis of Measurement and Presentation (continued)

These consolidated financial statements incorporate the financial statements of the Company and its 100% owned subsidiary. The accounts of the Company's subsidiary are prepared for the same reporting period as the parent company, using consistent accounting policies. Inter-company transactions, balances and unrealized gains or losses on transactions are eliminated. The Company's subsidiary is the following:

Name	Place of Incorporation	Ownership Percentage
XORTX Pharma Corp.	Canada	100%

These consolidated financial statements were approved for issue by the Board of Directors on April 23, 2021.

3. Accounting policies

These consolidated financial statements have been prepared using the following accounting policies:

Financial Instruments

a) Classification

The Company classifies its financial instruments in the following categories: at fair value through profit or loss ("FVTPL"), at fair value through other comprehensive income (loss) ("FVTOCI") or at amortized cost. The Company determines the classification of financial assets at initial recognition. The classification of debt instruments is driven by the Company's business model for managing the financial assets and their contractual cash flow characteristics.

Equity instruments that are held for trading are classified as FVTPL. For other equity instruments, on the day of acquisition the Company can make an irrevocable election (on an instrument-by-instrument basis) to designate them as at FVTOCI. Financial liabilities are measured at amortized cost, unless they are required to be measured at FVTPL (such as instruments held for trading or derivatives) or if the Company has opted to measure them at FVTPL.

The following are the Company's financial instruments at December 31, 2020:

	Classification
Cash	FVTPL
Accounts payable and accrued liabilities	amortized cost

b) Measurement

Financial assets at FVTOCI
Elected investments in equity instruments at FVTOCI are initially recognized at fair value plus transaction costs. Subsequently they are measured at fair value, with gains and losses recognized in other comprehensive income (loss).

Financial assets and liabilities at amortized cost
Financial assets and liabilities at amortized cost are initially recognized at fair value plus or minus transaction costs, respectively, and subsequently carried at amortized cost less any impairment.

Financial assets and liabilities at FVTPL
Financial assets and liabilities carried at FVTPL are initially recorded at fair value and transaction costs are expensed in the consolidated statements of net (loss) income. Realized and unrealized gains and losses arising from changes in the fair value of the financial assets and liabilities held at FVTPL are included in the consolidated statements of net (loss) income in the period in which they arise. Where management has opted to recognize a

3. Accounting policies (continued)

Financial Instruments (continued)

b) Measurement (continued)

Financial assets and liabilities at FVTPL (continued)
financial liability at FVTPL, any changes associated with the Company's own credit risk will be recognized in other comprehensive income (loss).

c) Impairment of financial assets at amortized cost

The Company recognizes a loss allowance for expected credit losses on financial assets that are measured at amortized cost.

At each reporting date, the Company measures the loss allowance for the financial asset at an amount equal to the lifetime expected credit losses if the credit risk on the financial asset has increased significantly since initial recognition. If at the reporting date, the financial asset has not increased significantly since initial recognition, the Company measures the loss allowance for the financial asset at an amount equal to the twelve month expected credit losses. The Company shall recognize in the consolidated statements of net (loss) income, as an impairment gain or loss, the amount of expected credit losses (or reversal) that is required to adjust the loss allowance at the reporting date to the amount that is required to be recognized.

d) Derecognition

Financial assets
The Company derecognizes financial assets only when the contractual rights to cash flows from the financial assets expire, or when it transfers the financial assets and substantially all of the associated risks and rewards of ownership to another entity. Gains and losses on derecognition are generally recognized in the consolidated statements of net (loss) income. However, gains and losses on derecognition of financial assets classified as FVTOCI remain within accumulated other comprehensive income (loss).

Financial liabilities
The Company derecognizes financial liabilities only when its obligations under the financial liabilities are discharged, cancelled or expired. Generally, the difference between the carrying amount of the financial liability derecognized and the consideration paid and payable, including any non-cash assets, is recognized in the consolidated statement of net income (loss).

Research and development costs
Research costs including clinical trial costs are expensed as incurred, net of recoveries until a drug product receives regulatory approval. Development costs that meet specific criteria related to technical, market and financial feasibility will be capitalized. To date, all research and development costs have been expensed.

Intangible assets
Intangible assets are measured at cost less accumulated amortization and accumulated impairment losses. Costs incurred for patents, patents pending and licenses are capitalized and amortized from the date of capitalization on a straight-line basis over the shorter of their respective remaining estimated lives or 20 years.

Government assistance
Amounts received or receivable resulting from government assistance programs, including grants and investment tax credits for research and development, are recognized where there is reasonable assurance that the amount of government assistance will be received and all attached conditions will be complied with. Investment tax credits

3. Accounting policies (continued)

Financial Instruments (continued)

d) Derecognition (continued)

Government assistance (continued)
relating to qualifying scientific research and experimental development expenditures that are recoverable are recognized as a reduction of expenses.

Impairment of long-lived assets
Intangible assets are tested for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. For the purpose of measuring recoverable amounts, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units or CGUs). The recoverable amount is the higher of an asset's fair value less costs to sell and value in use (being the present value of the expected future cash flows of the relevant asset or CGU). An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The Company evaluates impairment losses for potential reversals when events or circumstances warrant such consideration.

Convertible loans
Convertible loans are separated into their liability and equity components on the statement of financial position. The liability component is initially recognized at fair value, calculated as the net present value of a similar liability without an associated equity conversion feature and accounted for at amortized cost using the effective interest rate method. The effective interest rate used is the estimated rate for debt with similar terms at the time of issue. The fair value of the equity component (conversion feature) is determined at the time of issue as the difference between the face value of the exchangeable note and the fair value of the liability component.

Share-based payments
The Company has a stock option plan that is described in Note 11 and grants share options to acquire common shares of the Company to directors, officers, employees and consultants. Share-based payments to employees are measured at the fair value of the instruments granted. Share-based payments to non-employees are measured at the fair value of the goods or services received or the fair value of the equity instruments issued as calculated using the Black-Scholes option pricing model. The offset to the recorded expense is to reserve.

Consideration received on the exercise of stock options is recorded as share capital and the recorded amount in reserves is transferred to share capital.

Share capital
Common shares are classified as equity. Costs directly identifiable with share capital financing are charged against share capital. Share issuance costs incurred in advance of share subscriptions are recorded as deferred assets. Share issuance costs related to uncompleted share subscriptions are charged to operations in the period they are incurred.

The Company's common shares, warrants and options are classified as equity instruments. Incremental costs directly related to the issue of new shares or options are shown in equity as a deduction from the proceeds. For equity offerings of units consisting of a common share and warrant, when both instruments are classified as equity, the Company allocates proceeds first to common shares based on the estimated fair value of the common shares at the time the units are issued, with any excess value allocated to warrants.

From time to time in connection with private placements, the Company issues compensatory warrants ("Finders' Warrants") or warrant units ("Finders' Warrant Units") to agents as commission for services. Awards of Finders' Warrants and Finders' Warrant Units are accounted for in accordance with the fair value method of accounting

3. Accounting policies (continued)

Financial Instruments (continued)

d) Derecognition (continued)

Share capital (continued)
and result in share issue costs and a credit to reserves when Finders' Warrants and Finders' Warrant Units are issued. The fair value of Finders' Warrants is measured using the Black-Scholes option pricing model and the fair value of the Finders' Warrants Units is measured using the Geske compound option pricing model that both requires the use of certain assumptions regarding the risk-free market interest rate, expected volatility in the price of the underlying stock, and expected life of the instruments.

General provisions
A provision is a liability of uncertain timing or amount of a future expenditure when the Company has a present obligation as a result of a past event, it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The present value of expected future cash outflows is recognized as a liability and the increase to the liability due to the passage of time is recorded as a finance expense. The Company uses a credit adjusted discount rate that reflects current market assessments of the time value of money and the risk specific to the liability.

Earnings (loss) per common share
Basic earnings (loss) per common share is computed by dividing the net income (loss) available to common shareholders by the weighted average number of common shares outstanding during the period and the diluted loss per share assumes that the outstanding vested stock options and share purchase warrants had been exercised at the beginning of the year. Diluted earnings per share reflect the potential dilution that could share in the earnings of an entity. In the periods where a net loss is incurred, potentially dilutive common shares are excluded from the loss per share calculation as the effect would be anti-dilutive and basic and diluted loss per common share are the same. In a profit year, the weighted average number of common shares outstanding used for the calculation of diluted earnings per share assumes that the proceeds to be received on the exercise of dilutive stock options and warrants are used to repurchase the common shares at the average price per period.

Income taxes
The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

Deferred income tax assets also result from unused loss carry forwards, resource related pools and other deductions. A deferred tax asset is recognized for unused tax losses, tax credits and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Foreign currency translation
The Company's functional and presentation currency is the Canadian dollar. The functional currency of the Company and its subsidiary is the Canadian dollar.Foreign currency transactions are translated into Canadian dollars using the exchange rates prevailing at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies are translated at the rate of exchange in effect as of the financial position date. Gains and losses are recognized in profit or loss on a current basis.

4. Critical accounting judgments and estimates

The preparation of consolidated financial statements requires management to make judgments and estimates that affect the amounts reported in the consolidated financial statements and notes. By their nature, these judgments and estimates are subject to change and the effect on the consolidated financial statements of changes in such judgments and estimates in future periods could be material. These judgments and estimates are based on historical experience, current and future economic conditions, and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Actual results could differ from these judgments and estimates.

Revisions to accounting estimates are recognized in the period in which the estimate is revised and may affect both the period of revision and future periods. Information about critical accounting judgments in applying accounting policies that have the most significant risk of causing material adjustment to the carrying amounts of assets and liabilities recognized in the consolidated financial statements within the next financial year are discussed below:

Share-based payment transactions
The Company measures the cost of equity-settled transactions with employees by reference to the fair value of the equity instruments at the date at which they are granted. Estimating fair value for share-based payment transactions requires determining the most appropriate valuation model, which is dependent on the terms and conditions of the grant. This estimate also requires determining the most appropriate inputs to the valuation model including the expected life of the share option, volatility and dividend yield and making assumptions about them. The assumptions and models used for estimating fair value for share-based payment transactions are disclosed in Note 11.

Impairment of intangible assets
Patents (obtained and pending) and licenses are reviewed for impairment at each financial reporting date. If, in the judgment of management, that future economic benefits will not flow to the Company, then the Company will assess the recoverable value of the asset. If the carrying value is greater than the recoverable value, the asset will be impaired to the recoverable value.

Equity component of convertible loans
The convertible loans are classified as liabilities, with the exception of the portion relating to the conversion feature discount that is being accreted over the term of the debentures, utilizing the effective interest method which approximates the market rate at the date the loans were issued. Management uses its judgment to determine an interest rate that would have been applicable to non-convertible debt at the time the debentures were issued.

Going concern assumption
The preparation of these consolidated financial statements requires management to make judgments regarding the ability of the Company to continue as a going concern as discussed in Note 1.

5. Deposits

During 2018, the Company entered into an agreement with Cato Research Canada Inc. (“Cato”) to manage a planned clinical study. As part of this agreement, the Company paid a deposit of USD $505,331 and has committed to utilize Cato for this clinical study, subject to certain conditions. During the year ended December 31, 2020, Cato agreed to apply $436,240 of the deposit against the accounts payable balance owing to Cato and forgive interest on these balances of $36,234.

During the year ended December 31, 2020, the Company entered into an agreement with Prevail Partners LLC. As part of the agreement, the Company paid a deposit of $1,606,320 through the issuance of units in the private placement (USD $1,200,000 at the exchange rate on date of the transaction) to be applied to future regulatory and clinical trial programs.

(Expressed in Canadian Dollars)

5. Deposits (continued)

The Canadian dollar value of the deposits are shown below:

	December 31 2020 $	December 31 2019 $
Balance, beginning of year	656,324	689,373
Additions	1,606,320	—
Application of deposit against accounts payable	(436,240)	—
Foreign exchange adjustment	—	(33,049)
Balance, end of year	1,826,404	656,324

6. Accounts receivable and other

	December 31 2020 $	December 31 2019 $
GST receivable	14,351	8,974
Prepaid expenses	44,115	6,494
	58,466	15,468

Prepaid expenses primarily include amounts in connection with investor relations conferences and marketing activities.

7. Intangible assets

Cost	Total $
Balance, December 31, 2018	371,777
Additions	7,037
Balance, December 31, 2019	378,814
Additions	46,588
Impairment	(100,220)
Balance, December 31, 2020	**325,182**

Accumulated amortization	Total $
Balance, December 31, 2018	86,916
Amortization	19,510
Balance, December 31, 2019	106,426
Amortization	20,098
Impairment	(35,658)
Balance, December 31, 2020	**90,866**

Carrying values	Total $
At December 31, 2019	272,388
At December 31, 2020	**234,316**

7. Intangible assets (continued)

The Company has licensed intellectual property from various third parties as described below:

a) The Company has licensed from a third party (the "Licensor"), under patent rights purchase agreement dated July 9, 2013 and amended April 15, 2014, certain patents relating to allopurinol for the treatment of hypertension. The Company paid a total of $42,460 (US$40,000) to the Licensor per the terms of the agreement.

The Company will also pay the Licensor royalties on the cumulative net revenues from the sale or sublicense of the product covered under the patent license until the later of (i) the expiration of the last patent right covering the product; and (ii) the expiration of ten years from the date of the first commercial sales of a product.

b) In December 2012, the Company entered into an agreement to license certain intellectual property relating to the use of all uric acid lowering agents to improve the treatment of metabolic syndrome. Under this patent rights purchase agreement, between the Company and Dr. Richard Johnson and Dr. Takahiko Nakagawa (the "Vendors"), the Company issued 1,680,000 common shares at $0.03 per common share for a total instalment price of $50,400. The Company also had the option to pay the Vendors an additional US$75,000 to purchase the patents which was set up as a provision in the year ended December 31, 2018. (Note 9)

During the year ended December 31, 2020, the Company determined that it was no longer feasible to complete the purchase and as such, indicators of impairment existed leading to a test of recoverable amount of the license, which resulted in an impairment loss of $64,562. As this valuation technique requires management's judgement and estimates of the recoverable amount, it is classified within level 3 of the fair value hierarchy.

The Company will pay the Vendors a royalty based on the cumulative net revenues from the sale or sublicense of the product covered under the licensed intellectual property until the later of (i) the expiration of the last patent right covering the product and (ii) the expiration of 10 years from the date of the first commercial sales of a product.

c) Pursuant to a license agreement dated October 9, 2012, as amended on June 23, 2014, between the Company and the University of Florida Research Foundation, Inc. ("UFRF"), the Company acquired the exclusive license to the certain intellectual property related to the use of all uric acid lowering agents to treat insulin resistance. The Company has paid or is obligated to pay UFRF the following consideration:

i) an annual license fee of US$1,000 (2020 fees– paid);
ii) reimburse UFRF for United States and/or foreign costs associated with the maintenance of the licensed patents;
iii) the issuance to UFRF of 2,117,866 shares of common stock of the Company (1,887,592 have been issued to UFRF as at December 31, 2020. Remaining shares to be issued are included in obligation to issue shares);
iv) milestone payments of US$500,000 upon receipt of FDA approval to market licensed product in the United States of America and US$100,000 upon receipt of regulatory approval to market each licensed product in each of other jurisdictions;
v) royalty payments of up to 1.5% of net sales of products covered by the license until the later of (i) the expiration of any patent claims or (ii) 10 years from the date of the first commercial sale of any covered product in each country. Following commencement of commercial sales, the Company will be subject to certain annual minimum royalty payments that will increase annually up to a maximum of US$100,000 per year; and
vi) UFRF is entitled to receive a royalty of 5% of amounts received from any sub-licensee that are not based directly on product sales, excluding payments received for research and development or purchases of the Company's securities at not less than fair market value.

UFRF may terminate the agreement if the Company fails to meet the above specified milestones.

(Expressed in Canadian Dollars)

8. Accounts payable and accrued liabilities

	December 31 2020	December 31 2019
	$	$
Trade payables	389,982	607,389
Accrued liabilities	644,231	544,086
Total	1,034,213	1,151,475

9. Provision for patent acquisition

The Company had the option to pay US$75,000 in respect of a patent rights purchase agreement dated December 5, 2012 (Note 7). During the year ended December 31, 2020, the Company determined that the purchase was no longer feasible; therefore, the provision was reversed.

	December 31 2020	December 31 2019
	$	$
Balance, beginning of year	97,410	102,315
Foreign exchange adjustment	(1,920)	(4,905)
Recovery of provision	(95,490)	—
Balance, end of year	—	97,410

10. Convertible loans

On July 20, 2017, the Company issued a convertible note in connection with a service agreement pursuant to which the holder agreed to perform research and development services on behalf of the Company. The convertible note had a face value of US$30,000, was unsecured, bore interest at 15% and matured on July 19, 2020.

The conversion of the convertible note provided that upon the occurrence of an equity financing of at least US$1,000,000, the outstanding principal amount of the note and accrued interest, could, at the option of the note holder, be either (i) exchanged into the same securities issued in the equity financing or (ii) the note holder had the right to call all or a portion of the outstanding principal amount of the note together with all accrued interest immediately due and payable.

The liability component of this convertible note was calculated, at the date of issuance, as the present value of the principal and interest, at a rate approximating the interest rate that would have been applicable to non-convertible debt at the date the note was issued. The liability component was recorded at amortized cost and was accreted to the principal amount over the term of the convertible note by charges to accretion expense using an effective interest rate of 20%. During the year ended December 31, 2020, the $54,780 in debt was forgiven. The carrying value of the liability component was $nil at December 31, 2020 (2019 - $50,813). The carrying value of the conversion option of $5,202 was recorded as a separate component in total equity, and transferred to deficit when the debt was forgiven.

11. Share capital and reserves

a) Authorized and issued

Unlimited Class A common shares without par value – 81,179,118 issued as at December 31, 2020 (2019 - 62,919,691)
Unlimited Class B common shares without par value (none issued)
Unlimited Class C common shares without par value (none issued)
Unlimited Class D common shares without par value (none issued)
Unlimited Class E preferred shares without par value (none issued)
Unlimited Class F preferred shares without par value (none issued)

(Expressed in Canadian Dollars)

11. Share capital and reserves (continued)

b) Issuances

Year ended December 31, 2020:

On February 28, 2020, the Company closed a private placement, through the issuance of 18,259,427 units for gross proceeds of $2,556,320, of which $900,000 was received in cash, $50,000 represented the conversion of certain outstanding payables into units and $1,606,320 (US$1,200,000 at the then current exchange ratio) was issued to Prevail Partners LLC, who have agreed to provide certain services to the Company in exchange for units (Note 5).

Each unit comprised one common share and one common share purchase warrant exercisable at $0.25 for a period of one year from the issuance of the units. However, if at any time following the expiry of the statutory four-month hold period, the closing price of the common shares on the Canadian Securities Exchange is greater than $0.35 for 10 or more consecutive trading days, the Company may notify the holder, by way of a news release, that the warrants will expire on the 20th business day following the date of such notice, unless exercised by the holder before such date. The warrants were assigned a value of $91,297 using the residual method.

The Company paid $59,434 in cash share issuance costs and issued 139,657 finders' warrant units valued at $11,066, with each finder's warrant unit being exercisable at $0.14 for a period of 12 months from the closing of the private placement. Each finders' warrant unit comprised one common share and one common share purchase warrant exercisable at $0.25 for a period of one year from the closing date of the private placement. The warrants are subject to the same acceleration provision as the warrants issued in the private placement.

As at December 31, 2019, $70,000 of the cash proceeds were received and held in trust by the Company's lawyer and recorded as share subscriptions received in advance. The amount was reclassified to share capital during the year ended December 31, 2020, upon closing of the private placement.

Year ended December 31, 2019:

During the year ended December 31, 2019, there were no shares issued.

c) Escrow Shares

Following the closing of the RTO, the Company had an aggregate of 5,188,449 common shares held in escrow pursuant to an escrow agreement dated January 9, 2018. The shares are subject to a 10% release on January 25, 2018, with the remaining escrowed securities being released in 15% tranches every 6 months thereafter. As at December 31, 2020, there were 778,270 shares (2019 – 2,334,803) remaining in escrow.

d) Share Purchase Warrants

A summary of the changes in warrants for the years ended December 31, 2020 and 2019 is presented below:

	Number of Warrants		Exercise price
Balance, December 31, 2018 and 2019	4,004,740	$	0.80
Granted – February 28, 2020	18,259,427	$	0.25
Expired – January 10, 2020	(4,004,740)	$	0.80
Balance, December 31, 2020	**18,259,427**	**$**	**0.25**

The weighted average contractual remaining life of the unexercised warrants was 0.16 years (2019 – 0.02 years)

(Expressed in Canadian Dollars)

11. Share capital and reserves (continued)

d) Share Purchase Warrants (continued)

The following table summarizes information on warrants outstanding at December 31, 2020:

Exercise Price	Number Outstanding	Expiry date	Average Remaining Contractual Life
$0.25	18,259,427	February 28, 2021	0.16 years

Subsequent to the year ended December 31, 2020, 3,859,999 warrants were exercised for gross proceeds of $985,000, the remaining warrants expired unexercised.

e) Finders' Warrant Units

A summary of the changes in finders' warrant units for the years ended December 31, 2020 and 2019 is presented below:

	Number of Warrants	Exercise price
Balance, December 31, 2018 and 2019	—	—
Granted – February 28, 2020 – finders' warrants	139,657	$ 0.14/$0.25
Balance, December 31, 2020	**139,657**	**$ 0.14/$0.25**

The weighted average contractual remaining life of the unexercised finders' warrant units was 0.16 years (2019 – N/A)

The following table summarizes information on finders' warrant units outstanding at December 31, 2020:

Exercise Price	Number Outstanding	Expiry date	Average Remaining Contractual Life
$0.14/$0.25	139,657	February 28, 2021	0.16 years

The fair value of finders' warrant units was estimated at $11,059 on the date of grant using a compound options pricing model with the following inputs on the date of issuance of the finders' warrants units; allocated share price of $0.0001 for the share component of the unit; allocated price of $0.25 for the warrant component of the unit; exercise price of the unit of $0.14; expected life of 1.0 years for both the share component and warrant component of the unit; expected volatility of 99.76%; risk free rate of 1.37%; and expected dividend yield of 0%.

Subsequent to the year ended December 31, 2020, 125,657 finders' warrant units were exercised for gross proceeds of $17,592; the underlying warrants were then exercised for gross proceeds of $31,414. The remaining finders' warrant units expired unexercised.

f) Stock Options

The Company has an incentive Stock Option Plan (the "Plan") for directors, officers, employees and consultants, under which the Company may issue stock options to purchase common shares of the Company provided that the amount of incentive stock options which may be granted and outstanding under the Plan at any time shall not exceed 10% of the then issued and outstanding common shares of the Company and subject to the prior ratification by the CSE.

The fair value of stock options granted was estimated on the date of grant using the Black-Scholes model with the following data and assumptions. There were no options granted during the year ended December 31, 2019.

(Expressed in Canadian Dollars)

11. Share capital and reserves (continued)

f) Stock Options (continued)

	2020
Dividend yield	Nil
Annualized volatility	151.64% - 152.24%
Risk-free interest rate	0.33%
Expected life	5 years

The risk-free interest rate is the yield on zero-coupon Canadian Treasury Bill of a term consistent with the assumed option life. The expected life of the option is the average expected period to exercise. Volatility is based on available historical volatility of the Company's share price. The Company has not declared dividends in the past.

Of the 3,150,000 options granted June 23, 2020, 1,500,000 of the options vested immediately and 1,650,000 options vest in equal monthly installments over 36 months.

The 150,000 options granted August 25, 2020 vested immediately.

The share-based payment expense recognized was $293,443 during the year ended December 31, 2020 (2019 – $26,317).

A summary of the changes in stock options for the years ended December 31, 2020 and 2019 is presented below:

	Number of Options	Exercise price
Balance, December 31, 2018	2,424,000	$ 0.50
Forfeited	(274,000)	$ 0.50
Balance, December 31, 2019	2,150,000	$ 0.50
Granted – June 23, 2020	3,150,000	$ 0.14
Granted – August 25, 2020	150,000	$ 0.24
Balance, December 31, 2020	**5,450,000**	**$ 0.28**
Vested and exercisable, December 31, 2020	**4,019,444**	**$ 0.33**

The weighted average contractual remaining life of the unexercised options was 3.64 years (2019 – 3.33 years).

The following table summarizes information on stock options outstanding at December 31, 2020:

Exercise Price	Number Outstanding	Number Exercisable	Average Remaining Contractual Life
$0.50	1,750,000	1,750,000	2,21 years
$0.50	150,000	150,000	2.77 years
$0.50	250,000	194,444	2.85 years
$0.14	3,150,000	1,775,000	4.48 years
$0.24	150,000	150,000	4.66 years
	5,450,000	4,019,444	

12. Related party transactions

All related party transactions were measured at the amount of consideration established and agreed to by the related parties. All amounts due from/payable to related parties are unsecured, non-interest bearing and have no fixed terms of repayment.

(Expressed in Canadian Dollars)

12. Related party transactions (continued)

During the years ended December 31, 2020 and 2019, the Company incurred the following transactions with related parties:

a) Wages and benefits were accrued to an officer of the Company in the amount of $196,097 (2019 - $194,166).

b) Professional fees were accrued to an officer of the Company in the amount of $30,000 (2019 - $30,000).

c) Consulting fees were accrued to a director of the Company for directors' fees in the amount of $36,000 (2019 - $nil).

d) As at December 31, 2020, $52,450 (2019 - $39,550) was payable to the Chief Financial Officer ("CFO") of the Company for CFO services, and $20,340 (2019 - $nil) was payable to a director of the Company for directors' fees. The balance is unsecured, non-interest bearing, and has no fixed terms of repayment.

e) As at December 31, 2020, $518,084 (2019 - $502,110) was accrued to the Chief Executive Officer ("CEO") of the Company, for CEO services. The balance is unsecured, non-interest bearing and has no fixed terms of repayment. The balance owing was paid subsequent to year end.

f) Management compensation transactions for the years ended December 31, 2020 and 2019 are summarized as follows:

	Short-term employee benefits	Share-based payments	Total
	$	$	$
Year ended December 31, 2019			
Directors and officers	224,166	29,646	253,812
Year ended December 31, 2020			
Directors and officers	**262,097**	**217,816**	**479,913**

13. Income taxes

The income taxes shown in the consolidated statements of comprehensive loss differ from the amounts obtained by applying statutory rates to the loss before income taxes due to the following:

	2020	2019
	$	$
Net loss for the year	(1,285,000)	(630,000)
Statutory tax rate	27%	27%
Expected income tax recovery	(347,000)	(170,000)
Decrease to income tax recovery due to:		
Non-deductible permanent differences	79,000	16,000
Temporary differences	6,000	—
(Over) under provided in prior years	(278,000)	13,000
Change in tax assets not recognized	540,000	141,000
Income tax recovery	—	—

(Expressed in Canadian Dollars)

13. Income taxes (continued)

The significant components of the Company's deferred tax assets are as follows:

	December 31, 2020	December 31, 2019
	$	$
Share issuance costs	18,000	8,000
Cumulative eligible capital	100,000	31,000
Operating losses carried forward	1,341,000	880,000
Total deferred tax assets	1,459,000	919,000
Deferred tax assets not recognized	(1,459,000)	(919,000)
	—	—

The realization of income tax benefits related to these deferred potential tax deductions is not probable. Accordingly, no deferred income tax assets have been recognized for accounting purposes. The Company has Canadian non-capital losses carried forward of approximately $4,966,000 that may be available for tax purposes. The losses expire as follows:

Expiry date	$
2032	135,000
2033	748,000
2034	325,000
2035	287,000
2036	364,000
2037	618,000
2038	1,089,000
2039	553,000
2040	847,000
Total	4,966,000

14. Financial instruments and risk management

The Company's financial instruments consist of cash, funds held in trust, accounts payable and accrued liabilities, and the liability component on convertible loans. These financial instruments are classified as financial assets at FVTPL and financial liabilities at amortized cost. The fair values of these financial instruments approximate their carrying values at December 31, 2020, due to their short-term nature.

The following table presents the Company's financial instruments, measured at fair value on the consolidated statements of financial position as at December 31, 2020 and 2019 and categorized into levels of the fair value hierarchy:

		December 31, 2020		December 31, 2019	
	Level	Carrying Value	Estimated Fair Value *	Carrying Value	Estimated Fair Value *
		$	$	$	$
FVTPL					
Cash	1	171,271	171,271	58,614	58,614
Funds held in trust	1	—	—	70,000	70,000
Other financial liabilities					
Accounts payable and accrued liabilities	2	1,034,213	1,034,213	1,151,475	1,151,475
Liability component on convertible loans	2	—	—	50,813	50,813

* Fair value approximates the carrying amounts due to the short-term nature.

(Expressed in Canadian Dollars)

14. Financial instruments and risk management (continued)

There were no transfers for levels of change in the fair value measurements of financial instruments for the years ended December 31, 2020 and 2019.

Risk management is carried out by the Company's management team with guidance from the Board of Directors. The Company's risk exposures and their impact on the Company's financial instruments were as follows:

a) Credit risk

Credit risk is the risk of financial loss to the Company if a customer of counterparty to a financial instrument fails to meet its obligations. The Company's maximum exposure to credit risk at the financial position date under its financial instruments is summarized as follows:

	December 31, 2020	December 31, 2019
	$	$
Cash	171,271	58,614
Funds held in trust	—	70,000

All of the Company's cash is held with major financial institutions in Canada and management believes the exposure to credit risk with such institutions is minimal. The Company considers the risk of material loss to be significantly mitigated due to the financial strength of the major financial institutions where cash is held. Funds held in trust consisted of cash held in trust by the Company's lawyer, received by the Company during the year ended December 31, 2019 in connection with the private placement closed on February 28, 2020. The Company's maximum exposure to credit risk as at December 31, 2020 and 2019 is the carrying value of its financial assets.

b) Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its obligations associated with financial liabilities. The Company has a planning and budgeting process in place by which it anticipates and determines the funds required to support normal operation requirements as well as the growth and development of its intellectual property portfolio.

The Company's financial assets are comprised of its cash and funds held in trust, and the financial liabilities are comprised of its accounts payable and accrued liabilities and the liability component on convertible loans.

The contractual maturities of these financial liabilities as at December 31, 2020 and 2019 are summarized below:

	Payments due by period as of December 31, 2020			
	Total	Less than 3 months	Between 3 months and 1 year	1-3 years
	$	$	$	$
Accounts payable and accrued liabilities	1,034,213	1,034,213	—	—
	1,034,213	1,034,213	—	—

(Expressed in Canadian Dollars)

14. Financial instruments and risk management (continued)

b) Liquidity risk (continued)

	Payments due by period as of December 31, 2019			
	Total	Less than 3 months	Between 3 months and 1 year	1-3 years
	$	$	$	$
Accounts payable and accrued liabilities	1,151,475	1,151,475	—	—
Liability component on convertible loans	50,813	50,813	—	—
	1,202,288	1,202,288	—	—

c) Market risk

i) Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate due to changes in market interest rates. The Company's bank accounts bear interest. Management believes that the credit risk concentration with respect to financial instruments included in cash is minimal.

ii) Foreign Currency Risk

The Company is exposed to foreign exchange risk on its US$70,917 accounts payable and accrued liabilities balances, and US$404 cash account. Based on the foreign exchange exposure arising from the above, varying the foreign exchange rate to reflect a 10% appreciation or depreciation of the Canadian dollar against the U.S. dollar would result in an increase/decrease of approximately $7,000 (2019 - $61,000) in the Company's loss from operations.

15. Capital management

The Company defines capital that it manages as shareholders' equity (deficiency). The Company manages its capital structure in order to have funds available to support its research and development and sustain the future development of the business. When managing capital, the Company's objective is to ensure the entity continues as a going concern as well as to maintain optimal returns to shareholders and benefits for other stakeholders. Management adjusts the capital structure as necessary in order to support its activities.

Since inception, the Company's objective in managing capital is to ensure sufficient liquidity to finance its research and development activities, general and administrative expenses, expenses associated with intellectual property protection and its overall capital expenditures. There were no changes during the year ended December 31, 2020. The Company is not exposed to external requirements by regulatory agencies regarding its capital.

16. Commitments

The Company has long-term arrangements with commitments as at December 31, 2020 and 2019 as follows:

	December 31 2020	December 31 2019
	$	$
Management services – officers	192,000	192,000

The President, CEO and a director of the Company has a long-term employment agreement with the Company. The agreement has a termination clause whereby he is entitled to the equivalent of 12 times his then current monthly salary which, as of December 31, 2020 equated to $192,000.

17. Subsequent events

Subsequent to the year ended December 31, 2020, the Company:

a) Closed a private placement with the issuance of 24,486,286 units at a subscription price of $0.25 per unit for gross proceeds of $6,121,572. Each unit comprised one common share and one common share purchase warrant. Each warrant entitles the holder, on exercise, to purchase one additional common share in the capital of the Company, at a price of $0.40 for a period of 5 years from the issuance of the units; provided, however, that, if, at any time following the expiry of the statutory four month hold period, the closing price of the common shares on the CSE is greater than $1.20 for 10 or more consecutive trading days, the warrants will be accelerated upon notice and the warrants will expire on the 30th calendar day following the date of such notice. In addition, the Warrants will also be subject to typical anti-dilution provisions and a ratchet provision that provides for an adjustment in the exercise price should the Company issue or sell common shares or securities convertible into common shares at a price (or conversion price, as applicable) less than the exercise price such that the exercise price shall be amended to match such lower price.

   In connection with the private placement, the Company paid $171,085 in cash commissions and issued 684,340 finders' warrants. Each finders' warrant is exercisable into one common share at a price of $0.40 and having the same expiry, acceleration and anti-dilution provisions as the warrants included in the private placement. The common shares and warrants comprising the units issued pursuant to the private placement, and any common shares issued upon the exercise of the warrants or the finder's warrants, are subject to a four month hold period pursuant to applicable securities laws.

b) Issued 300,000 common shares pursuant to the terms of an investor relations services agreement.

XORTX Therapeutics Inc.
Common Shares,

Pre-Funded Warrants to Purchase

Common Shares and Warrants to Purchase

Common Shares

PROSPECTUS

, 2021

A.G.P.

Through and including , 2021 (the 25th day after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 6. Indemnification of Directors and Officers

Under the BCBCA, we may indemnify an individual who:

a) is or was our director or officer;

b) is or was a director or officer (y) at our request, or (z) of another corporation at the time when such corporation is or was an affiliate of ours; or

c) at our request, is or was, or holds or held a position equivalent to that of a director or officer of a partnership, trust, joint venture or other unincorporated entity,

against a judgment, penalty or fine awarded or imposed in, or an amount paid in settlement of, any legal proceeding or investigative action, whether current, threatened, pending or completed, in which such eligible party is involved because of that association with us or other entity.

However, indemnification is prohibited under the BCBCA if:

a) such eligible party did not act honestly and in good faith with a view to our best interests (or the other entity, as the case may be);

b) in the case of a proceeding other than a civil proceeding, such eligible party did not have reasonable grounds for believing that such person's conduct was lawful;

c) the indemnity or payment is made under an earlier agreement to indemnify or pay expenses and, at the time that the agreement to indemnify or pay expenses was made, the Company was prohibited from giving the indemnity or paying the expenses by its articles; or

d) the indemnity or payment is made otherwise than under an earlier agreement to indemnify or pay expenses and, at the time that the indemnity or payment is made, the Company was prohibited from giving the indemnity or paying the expenses by its articles.

We may not indemnify or pay the expenses of an eligible party in respect of an action brought against an eligible party by or on behalf of us.

The BCBCA allows us to pay, as they are incurred in advance of a final disposition of a proceeding, the expenses actually and reasonably incurred by the eligible party, provided that we receive from such eligible party an undertaking to repay the amounts advanced if it is ultimately determined that such payment is prohibited. Following the final disposition of an eligible proceeding, the BCBCA requires us to pay the expenses actually and reasonably incurred by the eligible party in respect of that proceeding if the eligible party has not been reimbursed for those expenses and is wholly successful, on the merits or otherwise, in the outcome of the proceeding, or is substantially successful on the merits in the outcome of the proceeding.

Despite the foregoing, on application by us or an eligible party, a court may:

a) order us to indemnify an eligible party in respect of an eligible proceeding;

b) order us to pay some or all of the expenses incurred by an eligible party in an eligible proceeding;

c) order enforcement of or any payment under an indemnification agreement;

d) order us to pay some or all of the expenses actually and reasonably incurred by a person in obtaining the order of the court; and

e) make any other order the court considers appropriate.

The BCBCA provides that we may purchase and maintain insurance for the benefit of an eligible party (or their heirs and personal or other legal representatives of the eligible party) against any liability that may be incurred by reason of the eligible party being or having been a director or officer, or in an equivalent position of ours or that of an associated corporation.

Our articles provide that, subject to the BCBCA, we must indemnify our directors, former directors or alternate directors and his or her heirs and legal personal representatives against all judgments, penalties or fines awarded or imposed in, or an amount paid in settlement of, all legal proceedings, investigative actions or other eligible proceedings (whether current, threatened, pending or completed) to which such person is or may be liable, and we must, after the final disposition of a legal proceeding, investigative action or other eligible proceeding, pay the expenses (which includes costs, charges and expenses, including legal and other fees but does not include judgments, penalties, fines or amounts paid in settlement of a proceeding) actually and reasonably incurred by such person in respect of that proceeding.

We have entered into indemnity agreements with our directors and certain officers which provide, among other things, that we will indemnify him or her to the fullest extent permitted by law from and against all liabilities, costs, charges and expenses incurred as a result of his or her actions in the exercise of his or her duties as a director or officer.

Prior to completion of this offering, we intend to enter into new indemnification agreements with each of our current directors and officers. The indemnification agreements will generally require that we indemnify and hold the indemnitees harmless to the greatest extent permitted by law for liabilities arising out of the indemnitees' service to us as directors and officers, if the indemnitees acted honestly and in good faith with a view to the best interests of the Company and, with respect to criminal and administrative actions or other non-civil proceedings that are enforced by monetary penalty, if the indemnitee had reasonable grounds to believe that his or her conduct was lawful. The indemnification agreements will also provide for the advancing of defense expenses to the indemnitees by us.

At present, we are not aware of any pending or threatened litigation or proceeding involving any of our directors, officers, employees or agents in which indemnification would be required or permitted.

The proposed form of Underwriting Agreement filed as Exhibit 1.1 to this Registration Statement provides for indemnification of our officers and directors by the underwriters against certain liabilities.

Item 7. Recent Sales of Unregistered Securities

Set forth below is information regarding all securities issued by us without registration under the Securities Act during the past three years. The information presented below does not give effect to our corporate reorganization as described in the prospectus forming part of this Registration Statement. We believe that each of such issuances was exempt from registration under the Securities Act in reliance on Section 4(2) of the Securities Act, Rule 701 and/or Regulation S under the Securities Act. No underwriter or underwriting discount or commission was involved in any of the transactions set forth in this Item 7.

Common Share Issuances

- On February 28, 2020, we issued 18,259,427 of our common shares in a private placement, at a price of $0.14 per share, for an aggregate offering price of $2,556,320.
- On February 9, 2021, we issued 24,486,286 of our common shares in a private placement, at a price of $0.25 per share, for an aggregate offering price of $6,121,572.
- Since January 1, 2021, we have issued 4,111,313 of our common shares pursuant to the exercise of warrants, with exercise prices ranging from $0.14 to $0.15 per share, for aggregate consideration of $1,014,006.
- On February 1, March 1, and March 31, 2021, we issued an aggregate of 300,000 of our common shares at a price of $0.285 per share, in exchange for services performed.

Stock Option Grants

- Since January 1, 2018, we have granted our employees, consultants and advisors options to purchase an aggregate of 6,924,000 options to acquire common shares under our equity compensation plans at exercise prices ranging from $0.14 to $0.50 per share.

Warrants

- On February 28, 2020 we issued warrants to purchase an aggregate of 18,397,084 common shares for exercise prices ranging between $0.14 to $0.25 per share, in connection with the common share issuance of the same date referenced above. As of the date of this registration statement, all of the warrants have either been exercised or have expired.
- On February 9, 2021, we issued warrants to purchase an aggregate of 25,170,626 common shares for an exercise price of $0.40 per share, in connection with the common share issuance of the same date referenced above. As of the date of this registration statement, none of the warrants have been exercised.

None of the foregoing transactions involved any underwriter, underwriting discounts or commissions or any public offering. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising.

Item 8. Exhibits and Financial Statement Schedules

The exhibits listed in the exhibits index, appearing elsewhere in this Registration Statement, have been filed as part of this Registration Statement.

All schedules have been omitted because they are not required, are not applicable or the information is otherwise set forth in the financial statements and related notes thereto.

EXHIBIT INDEX

Exhibit No.	Description
1.1*	Form of Underwriting Agreement.
3.1	Articles and Notice of Articles of the Registrant
4.1*	Specimen common share certificate.
4.2	Form of Common Share Purchase Warrant
4.3*	Investors' Rights Agreement, dated January 7, 2016, by and among the Registrant and the investors listed on Schedule A-1 and Schedule A-2 thereto.
4.4*	Form of pre-funded warrant
5.1*	Opinion of McCarthy Tétrault LLP
10.1†	Investigator Initiated-Clinical Trial Agreement, dated August 3, 2020, by and between the Registrant and Icahn School of Medicine at Mount Sinai.
10.2#†	Employment Agreement, dated January 1, 2018, by and between the Registrant and Allen Davidoff.
10.3†	Master Services Agreement, dated July 20, 2017, by and between the Registrant and Cato Research Canada Inc.
10.4#†	Consulting Agreement, dated February 1, 2021, by and between the Registrant and David Sans.
10.5#*	Consulting Agreement, dated March 1, 2021, by and between the Registrant and 1282803 Ontario Inc.
10.6†	Master Service and Technology Agreement, dated February 25, 2020, by and between the Registrant and Prevail InfoWorks, Inc.
10.7†	Side Letter to Master Service and Technology Agreement, dated February 24, 2020, by and between the Registrant and Prevail InfoWorks, Inc.
10.8†	Subscription Agreement, dated February 28, 2020, by and between the Registrant and Prevail Partners LLC.
10.9†*	Purchase Order and Proposal for Process Development and Manufacture dated June 30, 2020, by and between the Registrant and Lonza Pharma & Biotech.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Smythe LLP, an Independent Registered Public Accounting Firm.
23.2*	Consent of McCarthy Tétrault LLP (included in Exhibit 5.1).
24.1	Powers of Attorney (reference is made to the signature pages of this Registration Statement)

* To be filed by amendment.

† Registrant has omitted portions of the referenced exhibit pursuant to a request for confidential treatment under Rule 406 promulgated under the Securities Act.

Indicates management contract or compensatory plan.

Item 9. Undertakings

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions described in Item 6 hereof, or otherwise, the Registrant has been advised that in the opinion of the SEC 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 the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant 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 Registrant 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.

The undersigned Registrant hereby undertakes:

- To provide the underwriters specified in the underwriting agreement, at the closing, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser

- That for purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4), or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

- That for the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form F-1 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, on , 2021.

XORTX Therapeutics Inc.

By: /s/
Name: Allen Davidoff
Title: President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints each of and as his true and lawful attorney-in-fact and agent, each acting alone, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to this Registration Statement and to sign any related registration statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, each acting alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, each action alone, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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.

Signatures	Title	Date
/s/ Allen Davidoff	President and Chief Executive Officer and Director (Principal Executive Officer)	, 2021
/s/ James Fairbairn	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	, 2021
/s/ W. Bruce Rowlands	Director	, 2021
/s/ Paul Van Damme	Director	, 2021
/s/ Ian Klassen	Director	, 2021
/s/ Allan Williams	Director	, 2021
/s/ William Farley	Director	, 2021

AUTHORIZED REPRESENTATIVE

Pursuant to the requirements of the Securities Act of 1933, as amended, the undersigned certifies that it is the duly authorized United States representative of the registrant and has duly caused this Registration Statement on Form F-1 to be signed by the undersigned, thereunto duly authorized, on , 2021.

[NAME] (Authorized Representative in the United States)

/s/

Exhibit 3.1

Number: BC0911882

BRITISH COLUMBIA
The Best Place on Earth

CERTIFICATE

OF

INCORPORATION

BUSINESS CORPORATIONS ACT

I Hereby Certify that APAC RESOURCES INC. was incorporated under the Business Corporations Act on May 31,2011 at 03:04 PM Pacific Time.

Issued under my hand at Victoria, British Columbia
On May 31, 2011

RON TOWNSHEND
Registrar of Companies
Province of British Columbia
Canada

Incorporation Agreement and Articles in Long Form

APAC Resources Inc.

I propose to form a company under the *Business Corporations Act* (British Columbia).

I agree to take the number and class of shares in the company set opposite my name:

Full name and signature of incorporator	Date of signing	Number and class of shares being taken by incorporator
	May 31,2011	One Thousand (1,000) Common shares without par value

Robert Coltura
(Please print name)

/s/ Robert Coltura
(signature)

APAC Resources Inc.

(the "Company")

The Company has as its articles the following articles.

Full name and signature of each incorporator **Date of signing**

Robert Coltura

(Please print name)

/s/ Robert Coltura May 31, 2011
(signature)

Incorporation number: BC0911882

APAC Resources Inc.
(the "Company")

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1. Interpretation

1.1 Definitions

In these Articles, unless the context otherwise requires:

(1) "board of directors", "directors" and "board" mean the directors or sole director of the Company for the time being;

(2) *"Business Corporations Act"* means the *Business Corporations Act* (British Columbia) from time to time in force and all amendments thereto and includes all regulations and amendments thereto made pursuant to that Act;

(3) "legal personal representative" means the personal or other legal representative of the shareholder;

(4) "registered address" of a shareholder means the shareholder's address as recorded in the central securities register;

(5) "seal" means the seal of the Company, if any.

1.2 *Business Corporations Act* and *Interpretation Act* Definitions Applicable

The definitions in the *Business Corporations Act* and the definitions and rules of construction in the *Interpretation Act,* with the necessary changes, so far as applicable, and unless the context requires otherwise, apply to these Articles as if they were an enactment. If there is a conflict between a definition in the *Business Corporations Act* and a definition or rule in the *Interpretation Act* relating to a term used in these Articles, the definition in the *Business Corporations Act* will prevail in relation to the use of the term in these Articles. If there is a conflict between these Articles and the *Business Corporations Act,* the *Business Corporations Act* will prevail.

2. Shares and Share Certificates

2.1 Authorized Share Structure

The authorized share structure of the Company consists of shares of the class or classes and series, if any, described in the Notice of Articles of the Company.

2.2 Form of Share Certificate

Each share certificate issued by the Company must comply with, and be signed as required by, the *Business Corporations Act.*

2.3 Shareholder Entitled to Certificate or Acknowledgment

Unless the shares of which the shareholder is the registered owner are uncertificated shares within the meaning of the *Business Corporations Act,* each shareholder is entitled, without charge, to (a) one share certificate representing the shares of each class or series of shares registered in the shareholder's name or (b) a non-transferable written acknowledgment of the shareholder's right to obtain such a share certificate, provided that in respect of a share held jointly by several persons, the Company is not bound to issue more than one share certificate or acknowledgment and delivery of a share certificate or an acknowledgment to one of several joint shareholders or to one of the joint shareholders' duly authorized agent will be sufficient delivery to all.

2.4 Delivery by Mail

Any share certificate or non-transferable written acknowledgment of a shareholder's right to obtain a share certificate may be sent to the shareholder by mail at the shareholder's registered address and neither the Company nor any director, officer or agent of the Company is liable for any loss to the shareholder because the share certificate or acknowledgement is lost in the mail or stolen.

2.5 Replacement of Worn Out or Defaced Certificate or Acknowledgment

If the directors are satisfied that a share certificate or a non-transferable written acknowledgment of the shareholder's right to obtain a share certificate is worn out or defaced, they must, on production to them of the share certificate or acknowledgment, as the case may be, and on such other terms, if any, as they think fit:

(1) order the share certificate or acknowledgment, as the case may be, to be cancelled; and

(2) issue a replacement share certificate or acknowledgment, as the case may be.

2.6 Replacement of Lost, Stolen or Destroyed Certificate or Acknowledgment

If a share certificate or a non-transferable written acknowledgment of a shareholders right to obtain a share certificate is lost, stolen or destroyed, a replacement share certificate or acknowledgment, as the case may be, must be issued to the person entitled to that share certificate or acknowledgment, as the case may be, if the directors receive:

(1) proof satisfactory to them that the share certificate or acknowledgment is lost, stolen or destroyed;

(2) an indemnity bond sufficient in the Company’s judgment to protect the Company from any loss that the Company may suffer by issuing a new certificate; and

(3) satisfies any other reasonable requirements imposed by the directors.

A person entitled to a share certificate may not assert against the Company a claim for a new share certificate where a share certificate has been lost, apparently destroyed or wrongfully taken if that person fails to notify the Company of that fact within a reasonable time after that person has notice of it and the Company registers a transfer of the shares represented by the certificate before receiving a notice of the loss, apparent destruction or wrongful taking of the share certificate.

2.7 Recovery of New Share Certificate

If, after the issue of a new share certificate, a protected purchaser of the original share certificate presents the original share certificate for the registration of transfer, then in addition to any rights under the indemnity bond, the Company may recover the new share certificate from a person to whom it was issued or any person taking under that person other than a protected purchaser.

2.8 Splitting Share Certificates

If a shareholder surrenders a share certificate to the Company with a written request that the Company issue in the shareholder's name two or more share certificates, each representing a specified number of shares and in the aggregate representing the same number of shares as the share certificate so surrendered, the Company must cancel the surrendered share certificate and issue replacement share certificates in accordance with that request.

2.9 Certificate Fee

There must be paid to the Company, in relation to the issue of any share certificate under Articles 2.5,2.6 or 2.8, the amount, if any and which must not exceed the amount prescribed under the *Business Corporations Act,* determined by the directors.

2.10 Recognition of Trusts

Except as required by law or statute or these Articles, no person will be recognized by the Company as holding any share upon any trust, and the Company is not bound by or compelled in any way to recognize (even when having notice thereof) any equitable, contingent, future or partial interest in any share or fraction of a share or (except as by law or statute or these Articles provided or as ordered by a court of competent jurisdiction) any other rights in respect of any share except an absolute right to the entirety thereof in the shareholder.

3. Issue of Shares

3.1 Directors Authorized

Subject to the *Business Corporations Act* and the rights of the holders of issued shares of the Company, the Company may issue, allot, sell or otherwise dispose of the unissued shares, and issued shares held by the Company, at the times, to the persons, including directors, in the manner, on the terms and conditions and for the issue prices (including any premium at which shares with par value may be issued) that the directors may determine. The issue price for a share with par value must be equal to or greater than the par value of the share.

3.2 Commissions and Discounts

The Company may at any time pay a reasonable commission or allow a reasonable discount to any person in consideration of that person purchasing or agreeing to purchase shares of the Company from the Company or any other person or procuring or agreeing to procure purchasers for shares of the Company.

3.3 Brokerage

The Company may pay such brokerage fee or other consideration as may be lawful for or in connection with the sale or placement of its securities.

3.4 Conditions of Issue

Except as provided for by the *Business Corporations Act,* no share may be issued until it is fully paid. A share is fully paid when:

(1) consideration is provided to the Company for the issue of the share by one or more of the following:

(a) past services performed for the Company;

(b) property;

(c) money; and

(2) the value of the consideration received by the Company equals or exceeds the issue price set for the share under Article 3.1.

3.5 Share Purchase Warrants and Rights

Subject to the *Business Corporations Act,* the Company may issue share purchase warrants, options and rights upon such terms and conditions as the directors determine, which share purchase warrants, options and rights may be issued alone or in conjunction with debentures, debenture stock, bonds, shares or any other securities issued or created by the Company from time to time.

4. Share Registers

4.1 Central Securities Register

As required by and subject to the *Business Corporations Act,* the Company must maintain in British Columbia a central securities register. The directors may, subject to the *Business Corporations Act,* appoint an agent to maintain the central securities register. The directors may also appoint one or more agents, including the agent which keeps the central securities register, as transfer agent for its shares or any class or series of its shares, as the case may be, and the same or another agent as registrar for its shares or such class or series of its shares, as the case may be. The directors may terminate such appointment of any agent at any time and may appoint another agent in its place.

4.2 Closing Register

The Company must not at any time close its central securities register.

5. Share Transfers

5.1 Registering Transfers

The Company must register a transfer of a share of the Company if either:

(1) the Company or the transfer agent or registrar for the class or series of share to be transferred has received:

(a) in the case where the Company has issued a share certificate in respect of the share to be transferred, that share certificate and a written instrument of transfer (which may be on a separate document or endorsed on the share certificate) made by the shareholder or other appropriate person or by an agent who has actual authority to act on behalf of that person;

(b) in the case of a share that is not represented by a share certificate (including an uncertificated share within the meaning of the *Business Corporations Act* and including the case where the Company has issued a non-transferable written acknowledgment of the shareholder's right to obtain a share certificate in respect of the share to be transferred), a written instrument of transfer made by the shareholder or other appropriate person or by an agent who has actual authority to act on behalf of htat person; and

(c) such other evidence, if any, as the Company or the transfer agent or registrar for the class or series of share to be transferred may require to prove the title of the transferor or the transferor's right to transfer the share, that the written instrument of transfer is genuine and authorized and that the transfer is rightful or to a protected purchaser; or

(2) all the preconditions for a transfer of a share under the *Securities Transfer Act* have been met and the Company is required under the *Securities Transfer Act* to register the transfer.

5.1A Waivers of Requirements for Transfer

The Company may waive any of the requirements set out in Article 5.1(1) and any of the preconditions referred to in Article 5.1(2).

5.2 Form of Instrument of Transfer

The instrument of transfer in respect of any share of the Company must be either in the form, if any, on the back of the Company's share certificates or in any other form that may be approved by the Company or the transfer agent for the class or series shares to be transferred from time to time.

5.3 Transferor Remains Shareholder

Except to the extent that the *Business Corporations Act* otherwise provides, the transferor of shares is deemed to remain the holder of the shares until the name of the transferee is entered in a securities register of the Company in respect of the transfer.

5.4 Signing of Instrument of Transfer

If a shareholder, or other appropriate person or agent who has actual authority to act on behalf of that person, signs an instrument of transfer in respect of shares registered in the name of the shareholder, the signed instrument of transfer constitutes a complete and sufficient authority to the Company and its directors, officers and agents to register the number of shares specified in the instrument of transfer or specified in any other manner, or, if no number is specified, but share certificates are deposited with the instrument of transfer, all the shares represented by such share certificates:

(1) in the name of the person named as transferee in that instrument of transfer; or

(2) if no person is named as transferee in that instrument of transfer, in the name of the person on whose behalf the instrument is deposited for the purpose of having the transfer registered.

5.5 Enquiry as to Title Not Required

Neither the Company nor any director, officer or agent of the Company is bound to inquire into the title of the person named in the instrument of transfer as transferee or, if no person is named as transferee in the instrument of transfer, of the person on whose behalf the instrument is deposited for the purpose of having the transfer registered or is liable for any claim related to registering the transfer by the shareholder or by any intermediate owner or holder of the shares, of any interest in the shares, of any share certificate representing such shares or of any written acknowledgment of a right to obtain a share certificate for such shares.

5.6 Transfer Fee

There must be paid to the Company, in relation to the registration of any transfer, the amount, if any, determined by the directors.

6. Transmission of Shares

6.1 Legal Personal Representative Recognized on Death

In case of the death of a shareholder, the legal personal representative, or if the shareholder was a joint holder, the surviving joint holder, will be the only person recognized by the Company as having any title to the shareholder's interest in the shares. Before recognizing a person as a legal personal representative, the directors may require proof of appointment by a court of competent jurisdiction, a grant of letters probate, letters of administration or such other evidence or documents as the directors consider appropriate.

6.2 Rights of Legal Personal Representative

The legal personal representative has the rights, privileges and obligations that attach to the shares held by the shareholder, including the right to transfer the shares in accordance with these Articles, if the appropriate evidence of appointment or incumbency within the meaning of the *Securities Transfer Act* has been deposited with the Company. This Article 6.2 does not apply in the case of the death of a shareholder with respect to shares registered in the shareholder's name and the name of another person in joint tenancy.

7. Acquisition of Company's Shares

7.1 Company Authorized to Purchase or Otherwise Acquire Shares

Subject to Article 7.2, the special rights and restrictions attached to the shares of any class or series and the *Business Corporations Act,* the Company may, if authorized by the directors, purchase or otherwise acquire any of its shares at the price and upon the terms specified in such resolution.

7.2 No Purchase, Redemption or Other Acquisition When Insolvent

The Company must not make a payment or provide any other consideration to purchase or otherwise acquire any of its shares if there are reasonable grounds for believing that:

(1) the Company is insolvent; or

(2) making the payment or providing the consideration would render the Company insolvent.

7.3 Sale and Voting of Purchased, Redeemed or Otherwise Acquired Shares

If the Company retains a share redeemed, purchased or otherwise acquired by it, the Company may sell, gift or otherwise dispose of the share, but, while such share is held by the Company, it:

(1) is not entitled to vote the share at a meeting of its shareholders;

(2) must not pay a dividend in respect of the share; and

(3) must not make any other distribution in respect of the share.

8. Borrowing Powers

The Company, if authorized by the directors, may:

(1) borrow money in the manner and amount, on the security, from the sources and on the terms and conditions that they consider appropriate;

(2) issue bonds, debentures and other debt obligations either outright or as security for any liability or obligation of the Company or any other person and at such discounts or premiums and on such other terms as they consider appropriate;

(3) guarantee the repayment of money by any other person or the performance of any obligation of any other person; and

(4) mortgage, charge, whether by way of specific or floating charge, grant a security interest in, or give other security on, the whole or any part of the present and future assets and undertaking of the Company.

9. Alterations

9.1 Alteration of Authorized Share Structure

Subject to Article 9.3 and the *Business Corporations Act,* the Company may by resolution of the directors:

(1) create one or more classes or series of shares or, if none of the shares of a class or series of shares are allotted or issued, eliminate that class or series of shares;

(2) increase, reduce or eliminate the maximum number of shares that the Company is authorized to issue out of any class or series of shares or establish a maximum number of shares that the Company is authorized to issue out of any class or series of shares for which no maximum is established;

(3) if the Company is authorized to issue shares of a class of shares with par value:

(a) decrease the par value of those shares; or

(b) if none of the shares of that class of shares are allotted or issued, increase the par value of those shares;

(4) subdivide all or any of its unissued or fully paid issued shares in any manner;

(5) change all or any of its unissued, or fully paid issued, shares with par value into shares without par value or any of its unissued shares without par value into shares with par value;

(6) alter the identifying name of any of its shares; or

(7) otherwise alter its shares or authorized share structure when required or permitted to do so by the *Business Corporations Act,*

and, if applicable, alter its Notice of Articles and, if applicable, its Articles accordingly.

9.2 Consolidations

Subject to Article 9.3 and the *Business Corporations Act,* the Company may by ordinary resolution consolidate all or any of its unissued, or fully paid issued, shares, and, if applicable, alter its Notice of Articles and Articles accordingly.

9.3 Special Rights and Restrictions

Subject to the *Business Corporations Act,* the Company may by special resolution:

(1) create special rights or restrictions for, and attach those special rights or restrictions to, the shares of any class or series of shares, whether or not any or all of those shares have been issued; or

(2) vary or delete any special rights or restrictions attached to the shares of any class or series of shares, whether or not any or all of those shares have been issued;

and alter its Notice of Articles and Articles accordingly.

9.4 Change of Name

The Company may by resolution of the directors authorize an alteration of its Notice of Articles in order to change its name or adopt or change any translation of that name.

9.5 Other Alterations

If the *Business Corporations Act* does not specify the type of resolution and these Articles do not specify another type of resolution, the Company may by ordinary resolution alter these Articles.

10. Meetings of Shareholders

10.1 Annual General Meetings

Unless an annual general meeting is deferred or waived in accordance with the*Business Corporations Act,* the Company must hold its first annual general meeting within 18 months after the date on which it was incorporated or otherwise recognized, and after that must hold an annual general meeting at least once in each calendar year and not more than 15 months after the last annual reference date at such time and place as may be determined by the directors.

10.2 Resolution Instead of Annual General Meeting

If all the shareholders who are entitled to vote at an annual general meeting consent by a unanimous resolution under the*Business Corporations Act* to all of the business that is required to be transacted at that annual general meeting, the annual general meeting is deemed to have been held on the date of the unanimous resolution. The shareholders must, in any unanimous resolution passed under this Article 10.2, select as the Company's annual reference date a date that would be appropriate for the holding of the applicable annual general meeting.

10.3 Calling of Meetings of Shareholders

The directors may, whenever they think fit, call a meeting of shareholders, to be held at such time and place as may be determined by the directors.

10.4 Notice for Meetings of Shareholders

The Company must send notice of the date, time and location of any meeting of shareholders, in the manner provided in these Articles, or in such other manner, if any, as may be prescribed by ordinary resolution (whether previous notice of the resolution has been given or not), to each shareholder entitled to attend the meeting, to each director and to the auditor of the Company, unless these Articles otherwise provide, at least the following number of days before the meeting:

(1) if and for so long as the Company is a public company, 21 days;

(2) otherwise, 10 days.

10.5 Record Date for Notice

The directors may set a date as the record date for the purpose of determining shareholders entitled to notice of any meeting of shareholders. The record date must not precede the date on which the meeting is to be held by more than two months or, in the case of a general meeting requisitioned by shareholders under the *Business Corporations Act,* by more than four months. The record date must not precede the date on which the meeting is held by fewer than:

(1) if and for so long as the Company is a public company, 21 days;

(2) otherwise, 10 days.

If no record date is set, the record date is 5 p.m. on the day immediately preceding the first date on which the notice is sent or, if no notice is sent, the beginning of the meeting.

10.6 Record Date for Voting

The directors may set a date as the record date for the purpose of determining shareholders entitled to vote at any meeting of shareholders. The record date must not precede the date on which the meeting is to be held by more than two months or, in the case of a general meeting requisitioned by shareholders under the *Business Corporations Act,* by more than four months. If no record date is set, the record date is 5 p.m. on the day immediately preceding the first date on which the notice is sent or, if no notice is sent, the beginning of the meeting.

10.7 Failure to Give Notice and Waiver of Notice

The accidental omission to send notice of any meeting to, or the non-receipt of any notice by, any of the persons entitled to notice does not invalidate any proceedings at that meeting. Any person entitled to notice of a meeting of shareholders may, in writing or otherwise, waive or reduce the period of notice of such meeting.

10.8 Notice of Special Business at Meetings of Shareholders

If a meeting of shareholders is to consider special business within the meaning of Article 11.1, the notice of meeting must:

(1) state the general nature of the special business; and

(2) if the special business includes considering, approving, ratifying, adopting or authorizing any document or the signing of or giving of effect to any document, have attached to it a copy of the document or state that a copy of the document will be available for inspection by shareholders:

(a) at the Company's records office, or at such other reasonably accessible location in British Columbia as is specified in the notice; and

(b) during statutory business hours on any one or more specified days before the day set for the holding of the meeting.

11. Proceedings at Meetings of Shareholders

11.1 Special Business

At a meeting of shareholders, the following business is special business:

(1) at a meeting of shareholders that is not an annual general meeting, all business is special business except business relating to the conduct of or voting at the meeting;

(2) at an annual general meeting, all business is special business except for the following:

(a) business relating to the conduct of or voting at the meeting;

(b) consideration of any financial statements of the Company presented to the meeting;

(c) consideration of any reports of the directors or auditor;

(d) the setting or changing of the number of directors;

(e) the election or appointment of directors;

(f) the appointment of an auditor;

(g) the setting of the remuneration of an auditor;

(h) business arising out of a report of the directors not requiring the passing of a special resolution or an exceptional resolution;

(i) any other business which, under these Articles or the *Business Corporations Act,* may be transacted at a meeting of shareholders without prior notice of the business being given to the shareholders.

11.2 Special Majority

The majority of votes required for the Company to pass a special resolution at a meeting of shareholders is two-thirds of the votes cast on the resolution.

11.3 Quorum

Subject to the special rights and restrictions attached to the shares of any class or series of shares and save as herein otherwise provided, the quorum for the transaction of business at a meeting of shareholders is two shareholders, or one or more proxyholder representing two members, or one member and a proxyholder representing another member.

11.4 One Shareholder May Constitute Quorum

If there is only one shareholder entitled to vote at a meeting of shareholders:

(1) the quorum is one person who is, or who represents by proxy, that shareholder, and

(2) that shareholder, present in person or by proxy, may constitute the meeting.

11.5 Other Persons May Attend

The directors, the president (if any), the secretary (if any), the assistant secretary (if any), any lawyer for the Company, the auditor of the Company and any other persons invited by the directors are entitled to attend any meeting of shareholders, but if any of those persons does attend a meeting of shareholders, that person is not to be counted in the quorum and is not entitled to vote at the meeting unless that person is a shareholder or proxy holder entitled to vote at the meeting.

11.6 Requirement of Quorum

No business, other than the election of a chair of the meeting and the adjournment of the meeting, may be transacted at any meeting of shareholders unless a quorum of shareholders entitled to vote is present at the commencement of the meeting, but such quorum need not be present throughout the meeting.

11.7 Lack of Quorum

If, within one-half hour from the time set for the holding of a meeting of shareholders, a quorum is not present:

(1) in the case of a general meeting requisitioned by shareholders, the meeting is dissolved, and

(2) in the case of any other meeting of shareholders, the meeting stands adjourned to the same day in the next week at the same time and place.

11.8 Lack of Quorum at Succeeding Meeting

If, at the meeting to which the meeting referred to in Article 11.7(2) was adjourned, a quorum is not present within one-half hour from the time set for the holding of the meeting, the person or persons present and being, or representing by proxy, one or more shareholders entitled to attend and vote at the meeting constitute a quorum.

11.9 Chair

The following individual is entitled to preside as chair at a meeting of shareholders:

(1) the chair of the board, if any; or

(2) if the chair of the board is absent or unwilling to act as chair of the meeting, the president, if any.

11.10 Selection of Alternate Chair

If, at any meeting of shareholders, there is no chair of the board or president present within 15 minutes after the time set for holding the meeting, or if the chair of the board and the president are unwilling to act as chair of the meeting, or if the chair of the board and the president have advised the secretary, if any, or any director present at the meeting, that they will not be present at the meeting, the directors present must choose one of their number to be chair of the meeting or if all of the directors present decline to take the chair or fail to so choose or if no director is present, the shareholders entitled to vote at the meeting who are present in person or by proxy may choose any person present at the meeting to chair the meeting.

11.11 Adjournments

The chair of a meeting of shareholders may, and if so directed by the meeting must, adjourn the meeting from time to time and from place to place, but no business may be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place.

11.12 Notice of Adjourned Meeting

It is not necessary to give any notice of an adjourned meeting or of the business to be transacted at an adjourned meeting of shareholders except that, when a meeting is adjourned for 30 days or more, notice of the adjourned meeting must be given as in the case of the original meeting.

11.13 Decisions by Show of Hands or Poll

Subject to the *Business Corporations Act,* every motion put to a vote at a meeting of shareholders will be decided on a show of hands unless a poll, before or on the declaration of the result of the vote by show of hands, is directed by the chair or demanded by at least one shareholder entitled to vote who is present in person or by proxy.

11.14 Declaration of Result

The chair of a meeting of shareholders must declare to the meeting the decision on every question in accordance with the result of the show of hands or the poll, as the case may be, and that decision must be entered in the minutes of the meeting. A declaration of the chair that a resolution is carried by the necessary majority or is defeated is, unless a poll is directed by the chair or demanded under Article 11.13, conclusive evidence without proof of the number or proportion of the votes recorded in favour of or against the resolution.

11.15 Motion Need Not be Seconded

No motion proposed at a meeting of shareholders need be seconded unless the chair of the meeting rules otherwise, and the chair of any meeting of shareholders is entitled to propose or second a motion.

11.16 Casting Vote

In case of an equality of votes, the chair of a meeting of shareholders does not, either on a show of hands or on a poll, have a second or casting vote in addition to the vote or votes to which the chair may be entitled as a shareholder.

11.17 Manner of Taking Poll

Subject to Article 11.18, if a poll is duly demanded at a meeting of shareholders:

(1) the poll must be taken:

(a) at the meeting, or within seven days after the date of the meeting, as the chair of the meeting directs; and

(b) in the manner, at the time and at the place that the chair of the meeting directs;

(2) the result of the poll is deemed to be the decision of the meeting at which the poll is demanded; and

(3) the demand for the poll may be withdrawn by the person who demanded it.

11.18 Demand for Poll on Adjournment

A poll demanded at a meeting of shareholders on a question of adjournment must be taken immediately at the meeting.

11.19 Chair Must Resolve Dispute

In the case of any dispute as to the admission or rejection of a vote given on a poll, the chair of the meeting must determine the dispute, and his or her determination made in good faith is final and conclusive.

11.20 Casting of Votes

On a poll, a shareholder entitled to more than one vote need not cast all the votes in the same way.

11.21 Demand for Poll

No poll may be demanded in respect of the vote by which a chair of a meeting of shareholders is elected.

11.22 Demand for Poll Not to Prevent Continuance of Meeting

The demand for a poll at a meeting of shareholders does not, unless the chair of the meeting so rules, prevent the continuation of a meeting for the transaction of any business other than the question on which a poll has been demanded.

11.23 Retention of Ballots and Proxies

The Company must, for at least three months after a meeting of shareholders, keep each ballot cast on a poll and each proxy voted at the meeting, and, during that period, make them available for inspection during normal business hours by any shareholder or proxyholder entitled to vote at the meeting. At the end of such three month period, the Company may destroy such ballots and proxies.

12. Votes of Shareholders

12.1 Number of Votes by Shareholder or by Shares

Subject to any special rights or restrictions attached to any shares and to the restrictions imposed on joint shareholders under Article 12.3:

(1) on a vote by show of hands, every person present who is a shareholder or proxy holder and entitled to vote on the matter has one vote; and

(2) on a poll, every shareholder entitled to vote on the matter has one vote in respect of each share entitled to be voted on the matter and held by that shareholder and may exercise that vote either in person or by proxy.

12.2 Votes of Persons in Representative Capacity

A person who is not a shareholder may vote at a meeting of shareholders, whether on a show of hands or on a poll, and may appoint a proxy holder to act at the meeting, if, before doing so, the person satisfies the chair of the meeting, or the directors, that the person is a legal personal representative or a trustee in bankruptcy for a shareholder who is entitled to vote at the meeting.

12.3 Votes by Joint Holders

If there are joint shareholders registered in respect of any share:

(1) any one of the joint shareholders may vote at any meeting, either personally or by proxy, in respect of the share as if that joint shareholder were solely entitled to it; or

(2) if more than one of the joint shareholders is present at any meeting, personally or by proxy, and more than one of them votes in respect of that share, then only the vote of the joint shareholder present whose name stands first on the central securities register in respect of the share will be counted.

12.4 Legal Personal Representatives as Joint Shareholders

Two or more legal personal representatives of a shareholder in whose sole name any share is registered are, for the purposes of Article 12.3, deemed to be joint shareholders.

12.5 Representative of a Corporate Shareholder

If a corporation, that is not a subsidiary of the Company, is a shareholder, that corporation may appoint a person to act as its representative at any meeting of shareholders of the Company, and:

(1) for that purpose, the instrument appointing a representative must:

(a) be received at the registered office of the Company or at any other place specified, in the notice calling the meeting, for the receipt of proxies, at least the number of business days specified in the notice for the receipt of proxies, or if no number of days is specified, two business days before the day set for the holding of the meeting; or

(b) be provided, at the meeting, to the chair of the meeting or to a person designated by the chair of the meeting;

(2) if a representative is appointed under this Article 12.5:

(a) the representative is entitled to exercise in respect of and at that meeting the same rights on behalf of the corporation that the representative represents as that corporation could exercise if it were a shareholder who is an individual, including, without limitation, the right to appoint a proxy holder; and

(b) the representative, if present at the meeting, is to be counted for the purpose of forming a quorum and is deemed to be a shareholder present in person at the meeting.

Evidence of the appointment of any such representative may be sent to the Company by written instrument, fax or any other method of transmitting legibly recorded messages.

12.6 When Proxy Provisions Do Not Apply to the Company

If and for so long as the Company is a public company or a pre-existing reporting company which has the Statutory Reporting Company Provisions as part of its Articles or to which the Statutory Reporting Company Provisions apply, Articles 12.7 to 12.15 apply only insofar as they are not inconsistent with any securities legislation in any province or territory of Canada or in the federal jurisdiction of the United States or in any states of the United States that is applicable to the Company and insofar as they are not inconsistent with the regulations and rules made and promulgated under that legislation and all administrative policy statements, blanket orders and rulings, notices and other administrative directions issued by securities commissions or similar authorities appointed under that legislation, or any rules of an exchange on which securities of the Company are listed, or any rules of a quotation system on which securities of the Company are quoted.

12.7 Appointment of Proxy Holders

Every shareholder of the Company, including a corporation that is a shareholder but not a subsidiary of the Company, entitled to vote at a meeting of shareholders of the Company may, by proxy, appoint one or more (but not more than five) proxy holders to attend and act at the meeting in the manner, to the extent and with the powers conferred by the proxy.

12.8 Alternate Proxy Holders

A shareholder may appoint one or more alternate proxy holders to act in the place of an absent proxy holder.

12.9 When Proxy Holder Need Not Be Shareholder

A person must not be appointed as a proxy holder unless the person is a shareholder, although a person who is not a shareholder may be appointed as a proxy holder if:

(1) the person appointing the proxy holder is a corporation or a representative of a corporation appointed under Article 12.5;

(2) the Company has at the time of the meeting for which the proxy holder is to be appointed only one shareholder entitled to vote at the meeting;

(3) the shareholders present in person or by proxy at and entitled to vote at the meeting for which the proxy holder is to be appointed, by a resolution on which the proxy holder is not entitled to vote but in respect of which the proxy holder is to be counted in the quorum, permit the proxy holder to attend and vote at the meeting; or

(4) the Company is a public company.

12.10 Deposit of Proxy

A proxy for a meeting of shareholders must:

(1) be received at the registered office of the Company or at any other place specified, in the notice calling the meeting, for the receipt of proxies, at least the number of business days specified in the notice, or if no number of days is specified, two business days before the day set for the holding of the meeting; or

(2) unless the notice provides otherwise, be provided, at the meeting, to the chair of the meeting or to a person designated by the chair of the meeting.

A proxy may be sent to the Company by written instrument, fax or any other method of transmitting legibly recorded messages.

12.11 Validity of Proxy Vote

A vote given in accordance with the terms of a proxy is valid notwithstanding the death or incapacity of the shareholder giving the proxy and despite the revocation of the proxy or the revocation of the authority under which the proxy is given, unless notice in writing of that death, incapacity or revocation is received:

(1) at the registered office of the Company, at any time up to and including the last business day before the day set for the holding of the meeting at which the proxy is to be used; or

(2) at the meeting or any adjourned meeting, by the chair of the meeting or adjourned meeting, before any vote in respect of which the proxy has been given has been taken.

12.12 Form of Proxy

A proxy, whether for a specified meeting or otherwise, must be either in the following form or in any other form approved by the directors or the chair of the meeting:

APAC RESOURCES INC.
(the "Company")

The undersigned, being a shareholder of the Company, hereby appoints [name] or, failing that person, [name], as proxy holder for the undersigned to attend, act and vote for and on behalf of the undersigned at the meeting of shareholders of the Company to be held on [month, day, year] and at any adjournment of that meeting.

Number of shares in respect of which this proxy is given (if no number is specified, then this proxy if given in respect of all shares registered in the name of the shareholder):

Signed [month, day, year]

[Signature of shareholder]

[Name of shareholder printed]

12.13 Revocation of Proxy

Subject to Article 12.14, every proxy may be revoked by an instrument in writing that is received:

(1) at the registered office of the Company at any time up to and including the last business day before the day set for the holding of the meeting, or any adjourned meeting at which the proxy is to be used; or

(2) at the meeting, or any adjourned meeing by the chair of the meeting, or adjourned meeting, before any vote in respect of which the proxy has been given has been taken.

12.14 Revocation of Proxy Must Be Signed

An instrument referred to in Article 12.13 must be signed as follows:

(1) if the shareholder for whom the proxy holder is appointed is an individual, the instrument must be signed by the shareholder or his or her legal personal representative or trustee in bankruptcy;

(2) if the shareholder for whom the proxy holder is appointed is a corporation, the instrument must be signed by the corporation or by a representative appointed for the corporation under Article 12.5.

12.15 Chair May Determine Validity of Proxy

The chair of any meeting of shareholders may determine whether or not a proxy deposited for use at the meeting, which may not strictly comply with the requirements of this Part 12 as to form, execution, accompanying documentation, time of filing or otherwise, shall be valid for use at the meeting, and any such determination made in good faith shall be final, conclusive and binding upon the meeting.

12.16 Production of Evidence of Authority to Vote

The chair of any meeting of shareholders may, but need not, inquire into the authority of any person to vote at the meeting and may, but need not, demand from that person production of evidence as to the existence of the authority to vote.

13. Directors

13.1 First Directors; Number of Directors

The first directors are the persons designated as directors of the Company in the Notice of Articles that applies to the Company when it is recognized under the *Business Corporations Act.* The number of directors, excluding additional directors appointed under Article 14.8, is set at:

(1) subject to paragraphs (2) and (3), the number of directors that is equal to the number of the Company's first directors;

(2) if the Company is a public company, the greater of three and the most recently set of:

(a) the number of directors set by ordinary resolution (whether or not previous notice of the resolution was given); and

(b) the number of directors set under Article 14.4;

(3) if the Company is not a public company, the most recently set of:

(a) the number of directors set by ordinary resolution (whether or not previous notice of the resolution was given); and

(b) the number of directors set under Article 14.4.

13.2 Change in Number of Directors

If the number of directors is set under Articles 13.1 (2)(a) or 13.1 (3)(a):

(1) the shareholders may elect or appoint the directors needed to fill any vacancies in the board of directors up to that number;

(2) if the shareholders do not elect or appoint the directors needed to fill any vacancies in the board of directors up to that number contemporaneously with the setting of that number, then the directors may appoint, or the shareholders may elect or appoint, directors to fill those vacancies.

13.3 Directors' Acts Valid Despite Vacancy

An act or proceeding of the directors is not invalid merely because fewer than the number of directors set or otherwise required under these Articles is in office.

13.4 Qualifications of Directors

A director is not required to hold a share in the capital of the Company as qualification for his or her office but must be qualified as required by the *Business Corporations Act* to become, act or continue to act as a director.

13.5 Remuneration of Directors

The directors are entitled to the remuneration for acting as directors, if any, as the directors may from time to time determine. If the directors so decide, the remuneration of the directors, if any, will be determined by the shareholders. That remuneration may be in addition to any salary or other remuneration paid to any officer or employee of the Company as such, who is also a director.

13.6 Reimbursement of Expenses of Directors

The Company must reimburse each director for the reasonable expenses that he or she may incur in and about the business of the Company.

13.7 Special Remuneration for Directors

If any director performs any professional or other services for the Company that in the opinion of the directors are outside the ordinary duties of a director, or if any director is otherwise specially occupied in or about the Company's business, he or she may be paid remuneration fixed by the directors, or, at the option of that director, fixed by ordinary resolution, and such remuneration may be either in addition to, or in substitution for, any other remuneration that he or she may be entitled to receive.

13.8 Gratuity, Pension or Allowance on Retirement of Director

Unless otherwise determined by ordinary resolution, the directors on behalf of the Company may pay a gratuity or pension or allowance on retirement to any director who has held any salaried office or place of profit with the Company or to his or her spouse or dependants and may make contributions to any fund and pay premiums for the purchase or provision of any such gratuity, pension or allowance.

14. Election and Removal of Directors

14.1 Election at Annual General Meeting

At every annual general meeting and in every unanimous resolution contemplated by Article 10.2:

(1) the shareholders entitled to vote at the annual general meeting for the election of directors must elect, or in the unanimous resolution appoint, a board of directors consisting of the number of directors for the time being set under these Articles; and

(2) unless otherwise determined by resolution of the board of directors, all the directors cease to hold office immediately before the election or appointment of directors under paragraph (1), but are eligible for re-election or re-appointment.

14.2 Consent to be a Director

No election, appointment or designation of an individual as a director is valid unless:

(1) that individual consents to be a director in the manner provided for in the *Business Corporations Act;*

(2) that individual is elected or appointed at a meeting at which the individual is present and the individual does not refuse, at the meeting, to be a director; or

(3) with respect to first directors, the designation is otherwise valid under the *Business Corporations Act.*

14.3 Failure to Elect or Appoint Directors

If:

(1) the Company fails to hold an annual general meeting, and all the shareholders who are entitled to vote at an annual general meeting fail to pass the unanimous resolution contemplated by Article 10.2, on or before the date by which the annual general meeting is required to be held under the *Business Corporations Act;* or

(2) the shareholders fail, at the annual general meeting or in the unanimous resolution contemplated by Article 10.2, to elect or appoint any directors;

then each director then in office continues to hold office until the earlier of:

(3) the date on which his or her successor is elected or appointed; and

(4) the date on which he or she otherwise ceases to hold office under the *Business Corporations Act* or these Articles.

14.4 Places of Retiring Directors Not Filled

If, at any meeting of shareholders at which there should be an election of directors, the places of any of the retiring directors are not filled by that election, those retiring directors who are not re-elected and who are asked by the newly elected directors to continue in office will, if willing to do so, continue in office to complete the number of directors for the time being set pursuant to these Articles until further new directors are elected at a meeting of shareholders convened for that purpose. If any such election or continuance of directors does not result in the election or continuance of the number of directors for the time being set pursuant to these Articles, the number of directors of the Company is deemed to be set at the number of directors actually elected or continued in office.

14.5 Directors May Fill Casual Vacancies

Any casual vacancy occurring in the board of directors may be filled by the directors.

14.6 Remaining Directors Power to Act

The directors may act notwithstanding any vacancy in the board of directors, but if the Company has fewer directors in office than the number set pursuant to these Articles as the quorum of directors, the directors may only act for the purpose of appointing directors up to that number or of summoning a meeting of shareholders for the purpose of filling any vacancies on the board of directors or, subject to the *Business Corporations Act,* for any other purpose.

14.7 Shareholders May Fill Vacancies

If the Company has no directors or fewer directors in office than the number set pursuant to these Articles as the quorum of directors, the shareholders may elect or appoint directors to fill any vacancies on the board of directors.

14.8 Additional Directors

Notwithstanding Articles 13.1 and 13.2, between annual general meetings or unanimous resolutions contemplated by Article 10.2, the directors may appoint one or more additional directors, but the number of additional directors appointed under this Article 14.8 must not at any time exceed:

(1) one-third of the number of first directors, if, at the time of the appointments, one or more of the first directors have not yet completed their first term of office; or

(2) in any other case, one-third of the number of the current directors who were elected or appointed as directors other than under this Article 14.8.

Any director so appointed ceases to hold office immediately before the next election or appointment of directors under Article 14.1(1), but is eligible for re-election or re-appointment.

14.9 Ceasing to be a Director

A director ceases to be a director when:

(1) the term of office of the director expires;

(2) the director dies;

(3) the director resigns as a director by notice in writing provided to the Company or a lawyer for the Company; or

(4) the director is removed from office pursuant to Articles 14.10 or 14.11.

14.10 Removal of Director by Shareholders

The Company may remove any director before the expiration of his or her term of office by special resolution. In that event, the shareholders may elect, or appoint by ordinary resolution, a director to fill the resulting vacancy. If the shareholders do not elect or appoint a director to fill the resulting vacancy contemporaneously with the removal, then the directors may appoint or the shareholders may elect, or appoint by ordinary resolution, a director to fill that vacancy.

14.11 Removal of Director by Directors

The directors may remove any director before the expiration of his or her term of office if the director is convicted of an indictable offence, or if the director ceases to be qualified to act as a director of a company and does not promptly resign, and the directors may appoint a director to fill the resulting vacancy.

15. Alternate Directors

15.1 Appointment of Alternate Director

Any director (an "appointor") may by notice in writing received by the Company appoint any person (an "appointee") who is qualified to act as a director to be his or her alternate to act in his or her place at meetings of the directors or committees of the directors at which the appointor is not present unless (in the case of an appointee who is not a director) the directors have reasonably disapproved the appointment of such person as an alternate director and have given notice to that effect to his or her appointor within a reasonable time after the notice of appointment is received by the Company.

15.2 Notice of Meetings

Every alternate director so appointed is entitled to notice of meetings of the directors and of committees of the directors of which his or her appointor is a member and to attend and vote as a director at any such meetings at which his or her appointor is not present.

15.3 Alternate for More Than One Director Attending Meetings

A person may be appointed as an alternate director by more than one director, and an alternate director:

(1) will be counted in determining the quorum for a meeting of directors once for each of his or her appointors and, in the case of an appointee who is also a director, once more in that capacity;

(2) has a separate vote at a meeting of directors for each of his or her appointors and, in the case of an appointee who is also a director, an additional vote in that capacity;

(3) will be counted in determining the quorum for a meeting of a committee of directors once for each of his or her appointors who is a member of that committee and, in the case of an appointee who is also a member of that committee as a director, once more in that capacity;

(4) has a separate vote at a meeting of a committee of directors for each of his or her appointors who is a member of that committee and, in the case of an appointee who is also a member of that committee as a director, an additional vote in that capacity.

15.4 Consent Resolutions

Every alternate director, if authorized by the notice appointing him or her, may sign in place of his or her appointor any resolutions to be consented to in writing.

15.5 Alternate Director Not an Agent

Every alternate director is deemed not to be the agent of is or her appointor.

15.6 Revocation of Appointment of Alternate Director

An appointor may at any time, by notice in writing received by the Company, revoke the appointment of an alternate director appointed by him or her.

15.7 Ceasing to be an Alternate Director

The appointment of an alternate director ceases when:

(1) his or her appointor ceases to be a director and is not promptly re-elected or re-appointed;

(2) the alternate director dies;

(3) the alternate director resigns as an alternate director by notice in writing provided to the Company or a lawyer for the Company;

(4) the alternate director ceases to be qualified to act as a director; or

(5) his or her appointor revokes the appointment of the alternate director.

15.8 Remuneration and Expenses of Alternate Director

The Company may reimburse an alternate director for the reasonable expenses that would be properly reimbursed if he or she were a director, and the alternate director is entitled to receive from the Company such proportion, if any, of the remuneration otherwise payable to the appointor as the appointor may from time to time direct.

16. Powers and Duties of Directors

16.1 Powers of Management

The directors must, subject to the *Business Corporations Act* and these Articles, manage or supervise the management of the business and affairs of the Company and have the authority to exercise all such powers of the Company as are not, by the *Business Corporations Act* or by these Articles, required to be exercised by the shareholders of the Company.

16.2 Appointment of Attorney of Company

The directors may from time to time, by power of attorney or other instrument, under seal if so required by law, appoint any person to be the attorney of the Company for such purposes, and with such powers, authorities and discretions (not exceeding those vested in or exercisable by the directors under these Articles and excepting the power to fill vacancies in the board of directors, to remove a director, to change the membership of, or fill vacancies in, any committee of the directors, to appoint or remove officers appointed by the directors and to declare dividends) and for such period, and with such remuneration and subject to such conditions as the directors may think fit. Any such power of attorney may contain such provisions for the protection or convenience of persons dealing with such attorney as the directors think fit. Any such attorney may be authorized by the directors to sub-delegate all or any of the powers, authorities and discretions for the time being vested in him or her.

17. Disclosure of Interest of Directors

17.1 Obligation to Account for Profits

A director or senior officer who holds a disclosable interest (as that term is used in the*Business Corporations Act)* in a contract or transaction into which the Company has entered or proposes to enter is liable to account to the Company for any profit that accrues to the director or senior officer under or as a result of the contract or transaction only if and to the extent provided in the *Business Corporations Act.*

17.2 Restrictions on Voting by Reason of Interest

A director who holds a disclosable interest in a contract or transaction into which the Company has entered or proposes to enter is not entitled to vote on any directors resolution to approve that contract or transaction, unless all the directors have a disclosable interest in that contract or transaction, in which case any or all of those directors may vote on such resolution.

17.3 Interested Director Counted in Quorum

A director who holds a disclosable interest in a contract or transaction into which the Company has entered or proposes to enter and who is present at the meeting of directors at which the contract or transaction is considered for approval may be counted in the quorum at the meeting whether or not the director votes on any or all of the resolutions considered at the meeting.

17.4 Disclosure of Conflict of Interest or Property

A director or senior officer who holds any office or possesses any property, right or interest that could result, directly or indirectly, in the creation of a duty or interest that materially conflicts with that individual's duty or interest as a director or senior officer, must disclose the nature and extent of the conflict as required by the *Business Corporations Act.*

17.5 Director Holding Other Office in the Company

A director may hold any office or place of profit with the Company, other than the office of auditor of the Company, in addition to his or her office of director for the period and on the terms (as to remuneration or otherwise) that the directors may determine.

17.6 No Disqualification

No director or intended director is disqualified by his or her office from contracting with the Company either with regard to the holding of any office or place of profit the director holds with the Company or as vendor, purchaser or otherwise, and no contract or transaction entered into by or on behalf of the Company in which a director is in any way interested is liable to be voided for that reason.

17.7 Professional Services by Director or Officer

Subject to the *Business Corporations Act,* a director or officer, or any person in which a director or officer has an interest, may act in a professional capacity for the Company, except as auditor of the Company, and the director or officer or such person is entitled to remuneration for professional services as if that director or officer were not a director or officer.

17.8 Director or Officer in Other Corporations

A director or officer may be or become a director, officer or employee of, or otherwise interested in, any person in which the Company may be interested as a shareholder or otherwise, and, subject to the *Business Corporations Act,* the director or officer is not accountable to the Company for any remuneration or other benefits received by him or her as director, officer or employee of, or from his or her interest in, such other person.

18. Proceedings of Directors

18.1 Meetings of Directors

The directors may meet together for the conduct of business, adjourn and otherwise regulate their meetings as they think fit, and meetings of the directors held at regular intervals may be held at the place, at the time and on the notice, if any, as the directors may from time to time determine.

18.2 Voting at Meetings

Questions arising at any meeting of directors are to be decided by a majority of votes and, in the case of an equality of votes, the chair of the meeting does not have a second or casting vote.

18.3 Chair of Meetings

The following individual is entitled to preside as chair at a meeting of directors:

(1) the chair of the board, if any;

(2) in the absence of the chair of the board, the president, if any, if the president is a director; or

(3) any other director chosen by the directors if:

(a) neither the chair of the board nor the president, if a director, is present at the meeting within 15 minutes after the time set for holding the meeting;

(b) neither the chair of the board nor the president, if a director, is willing to chair the meeting; or

(c) the chair of the board and the president, if a director, have advised the secretary, if any, or any other director, that they will not be present at the meeting.

18.4 Meetings by Telephone or Other Communications Medium

A director may participate in a meeting of the directors or of any committee of the directors in person or by telephone if all directors participating in the meeting, whether in person or by telephone or other communications medium, are able to communicate with each other. A director may participate in a meeting of the directors or of any committee of the directors by a communications medium other than telephone if all directors participating in the meeting, whether in person or by telephone or other communications medium, are able to communicate with each other and if all directors who wish to participate in the meeting agree to such participation. A director who participates in a meeting in a manner contemplated by this Article 18.4 is deemed for all purposes of the *Business Corporations Act* and these Articles to be present at the meeting and to have agreed to participate in that manner.

18.5 Calling of Meetings

A director may, and the secretary or an assistant secretary of the Company, if any, on the request of a director must, call a meeting of the directors at any time.

18.6 Notice of Meetings

Other than for meetings held at regular intervals as determined by the directors pursuant to Article 18.1, reasonable notice of each meeting of the directors, specifying the place, day and time of that meeting must be given to each of the directors and the alternate directors by any method set out in Article 24.1 or orally or by telephone.

18.7 When Notice Not Required

It is not necessary to give notice of a meeting of the directors to a director or an alternate director if:

(1) the meeting is to be held immediately following a meeting of shareholders at which that director was elected or appointed, or is the meeting of the directors at which that director is appointed; or

(2) the director or alternate director, as the case may be, has waived notice of the meeting.

18.8 Meeting Valid Despite Failure to Give Notice

The accidental omission to give notice of any meeting of directors to, or the non-receipt of any notice by, any director or alternate director, does not invalidate any proceedings at that meeting.

18.9 Waiver of Notice of Meetings

Any director or alternate director may send to the Company a document signed by him or her waiving notice of any past, present or future meeting or meetings of the directors and may at any time withdraw that waiver with respect to meetings held after that withdrawal. After sending a waiver with respect to all future meetings and until that waiver is withdrawn, no notice of any meeting of the directors need be given to that director and, unless the director otherwise requires by notice in writing to the Company, to his or her alternate director, and all meetings of the directors so held are deemed not to be improperly called or constituted by reason of notice not having been given to such director or alternate director.

18.10 Quorum

The quorum necessary for the transaction of the business of the directors may be set by the directors and, if not so set, is deemed to be set at two directors or, if the number of directors is set at one, is deemed to be set at one director, and that director may constitute a meeting.

18.11 Validity of Acts Where Appointment Defective

Subject to the *Business Corporations Act,* an act of a director or officer is not invalid merely because of an irregularity in the election or appointment or a defect in the qualification of that director or officer.

18.12 Consent Resolutions in Writing

A resolution of the directors or of any committee of the directors may be passed without a meeting:

(1) in all cases, if each of the directors entitled to vote on the resolution consents to it in writing; or

(2) in the case of a resolution to approve a contract or transaction in respect of which a director has disclosed that he or she has or may have a disclosable interest, if each of the other directors who are entitled to vote on the resolution consents to it in writing.

A consent in writing under this Article may be by signed document, fax, email or any other method of transmitting legibly recorded messages. A consent in writing may be in two or more counterparts which together are deemed to constitute one consent in writing. A resolution of the directors or of any committee of the directors passed in accordance with this Article 18.12 is effective on the date stated in the consent in writing or on the latest date stated on any counterpart and is deemed to be a proceeding at a meeting of directors or of the committee of the directors and to be as valid and effective as if it had been passed at a meeting of the directors or of the committee of the directors that satisfies all the requirements of the *Business Corporations Act* and all the requirements of these Articles relating to meetings of the directors or of a committee of the directors.

19. Executive and Other Committees

19.1 Appointment and Powers of Executive Committee

The directors may, by resolution, appoint an executive committee consisting of the director or directors that they consider appropriate, and this committee has, during the intervals between meetings of the board of directors, all of the directors' powers, except:

(1) the power to fill vacancies in the board of directors;

(2) the power to remove a director;

(3) the power to change the membership of, or fill vacancies in, any committee of the directors; and

(4) such other powers, if any, as may be set out in the resolution or any subsequent directors' resolution.

19.2 Appointment and Powers of Other Committees

The directors may, by resolution:

(1) appoint one or more committees (other than the executive committee) consisting of the director or directors that they consider appropriate;

(2) delegate to a committee appointed under paragraph (1) any of the directors' powers, except:

(a) the power to fill vacancies in the board of directors;

(b) the power to remove a director;

(c) the power to change the membership of, or fill vacancies in, any committee of the directors; and

(d) the power to appoint or remove officers appointed by the directors; and

(3) make any delegation referred to in paragraph (2) subject to the conditions set out in the resolution or any subsequent directors' resolution.

19.3 Obligations of Committees

Any committee appointed under Articles 19.1 or 19.2, in the exercise of the powers delegated to it, must:

(1) conform to any rules that may from time to time be imposed on it by the directors; and

(2) report every act or thing done in exercise of those powers at such times as the directors may require.

19.4 Powers of Board

The directors may, at any time, with respect to a committee appointed under Articles 19.1 or 19.2:

(1) revoke or alter the authority given to the committee, or override a decision made by the committee, except as to acts done before such revocation, alteration or overriding;

(2) terminate the appointment of, or change the membership of, the committee; and

(3) fill vacancies in the committee.

19.5 Committee Meetings

Subject to Article 19.3(1) and unless the directors otherwise provide in the resolution appointing the committee or in any subsequent resolution, with respect to a committee appointed under Articles 19.1 or 19.2:

(1) the committee may meet and adjourn as it thinks proper;

(2) the committee may elect a chair of its meetings but, if no chair of a meeting is elected, or if at a meeting the chair of the meeting is not present within 15 minutes after the time set for holding the meeting, the directors present who are members of the committee may choose one of their number to chair the meeting;

(3) a majority of the members of the committee constitutes a quorum of the committee; and

(4) questions arising at any meeting of the committee are determined by a majority of votes of the members present, and in case of an equality of votes, the chair of the meeting does not have a second or casting vote.

20. Officers

20.1 Directors May Appoint Officers

The directors may, from time to time, appoint such officers, if any, as the directors determine and the directors may, at any time, terminate any such appointment.

20.2 Functions, Duties and Powers of Officers

The directors may, for each officer:

(1) determine the functions and duties of the officer;

(2) entrust to and confer on the officer any of the powers exercisable by the directors on such terms and conditions and with such restrictions as the directors think fit; and

(3) revoke, withdraw, alter or vary all or any of the functions, duties and powers of the officer.

20.3 Qualifications

No officer may be appointed unless that officer is qualified in accordance with the *Business Corporations Act.* One person may hold more than one position as an officer of the Company. Any person appointed as the chair of the board or as a managing director must be a director. Any other officer need not be a director.

20.4 Remuneration and Terms of Appointment

All appointments of officers are to be made on the terms and conditions and at the remuneration (whether by way of salary, fee, commission, participation in profits or otherwise) that the directors thinks fit and are subject to termination at the pleasure of the directors, and an officer may in addition to such remuneration be entitled to receive, after he or she ceases to hold such office or leaves the employment of the Company, a pension or gratuity.

21. Indemnification

21.1 Definitions

In this Article 21:

(1) "eligible penalty" means a judgment, penalty or fine awarded or imposed in, or an amount paid in settlement of, an eligible proceeding;

(2) "eligible proceeding" means a legal proceeding or investigative action, whether current, threatened, pending or completed, in which a director, former director or alternate director of the Company (an "eligible party") or any of the heirs and legal personal representatives of the eligible party, by reason of the eligible party being or having been a director or alternate director of the Company:

(a) is or may be joined as a party; or

(b) is or may be liable for or in respect of a judgment, penalty or fine in, or expenses related to, the proceeding;

(3) "expenses" has the meaning set out in the *Business Corporations Act.*

21.2 Mandatory Indemnification of Directors and Former Directors

Subject to the *Business Corporations Act,* the Company must indemnify a director, former director or alternate director of the Company and his or her heirs and legal personal representatives against all eligible penalties to which such person is or may be liable, and the Company must, after the final disposition of an eligible proceeding, pay the expenses actually and reasonably incurred by such person in respect of that proceeding. Each director and alternate director is deemed to have contracted with the Company on the terms of the indemnity contained in this Article 21.2.

21.3 Indemnification of Other Persons

Subject to any restrictions in the *Business Corporations Act,* the Company may indemnify any person.

21.4 Non-Compliance with *Business Corporations Act*

The failure of a director, alternate director or officer of the Company to comply with the *Business Corporations Act* or these Articles does not invalidate any indemnity to which he or she is entitled under this Part.

21.5 Company May Purchase Insurance

The Company may purchase and maintain insurance for the benefit of any person (or his or her heirs or legal personal representatives) who:

(1) is or was a director, alternate director, officer, employee or agent of the Company;

(2) is or was a director, alternate director, officer, employee or agent of a corporation at a time when the corporation is or was an affiliate of the Company;

(3) at the request of the Company, is or was a director, alternate director, officer, employee or agent of a corporation or of a partnership, trust joint venture or other unincorporated entity;

(4) at the request of the Company, holds or held a position equivalent to that of a director, alternate director or officer of a partnership, trust, joint venture or other unincorporated entity;

against any liability incurred by him or her as such director, alternate director, officer, employee or agent or person who holds or held such equivalent position.

22. Dividends

22.1 Payment of Dividends Subject to Special Rights

The provisions of this Article 22 are subject to the rights, if any, of shareholders holding shares with special rights as to dividends.

22.2 Declaration of Dividends

Subject to the *Business Corporations Act,* the directors may from time to time declare and authorize payment of such dividends as they may deem advisable. The Board of Directors shall have the right and authority to declare dividends on any class of shares, to the exclusion of and without declaring dividends on any other class of shares, in their sole discretion as they see fit.

22.3 No Notice Required

The directors need not give notice to any shareholder of any declaration under Article 22.2.

22.4 Record Date

The directors may set a date as the record date for the purpose of determining shareholders entitled to receive payment of a dividend. The record date must not precede the date on which the dividend is to be paid by more than two months. If no record date is set, the record date is 5 p.m. on the date on which the directors pass the resolution declaring the dividend.

22.5 Manner of Paying Dividend

A resolution declaring a dividend may direct payment of the dividend wholly or partly by the distribution of specific assets or of fully paid shares or of bonds, debentures or other securities of the Company, or in any one or more of those ways.

22.6 Settlement of Difficulties

If any difficulty arises in regard to a distribution under Article 22.5, the directors may settle the difficulty as they deem advisable, and, in particular, may:

(1) set the value for distribution of specific assets;

(2) determine that cash payments in substitution for all or any part of the specific assets to which any shareholders are entitled may be made to any shareholders on the basis of the value so fixed in order to adjust the rights of all parties; and

(3) vest any such specific assets in trustees for the persons entitled to the dividend.

22.7 When Dividend Payable

Any dividend may be made payable on such date as is fixed by the directors.

22.8 Dividends to be Paid in Accordance with Number of Shares

All dividends on shares of any class or series of shares must be declared and paid according to the number of such shares held.

22.9 Receipt by Joint Shareholders

If several persons are joint shareholders of any share, any one of them may give an effective receipt for any dividend, bonus or other money payable in respect of the share.

22.10 Dividend Bears No Interest

No dividend bears interest against the Company.

22.11 Fractional Dividends

If a dividend to which a shareholder is entitled includes a fraction of the smallest monetary unit of the currency of the dividend, that fraction may be disregarded in making payment of the dividend and that payment represents full payment of the dividend.

22.12 Payment of Dividends

Any dividend or other distribution payable in cash in respect of shares may be paid by cheque, made payable to the order of the person to whom it is sent, and mailed to the address of the shareholder, or in the case of joint shareholders, to the address of the joint shareholder who is first named on the central securities register, or to the person and to the address the shareholder or joint shareholders may direct in writing. The mailing of such cheque will, to the extent of the sum represented by the cheque (plus the amount of the tax required by law to be deducted), discharge all liability for the dividend unless such cheque is not paid on presentation or the amount of tax so deducted is not paid to the appropriate taxing authority.

22.13 Capitalization of Surplus

Notwithstanding anything contained in these Articles, the directors may from time to time capitalize any surplus of the Company and may from time to time issue, as fully paid, shares or any bonds, debentures or other securities of the Company as a dividend representing the surplus or any part of the surplus.

23. ACCOUNTING RECORDS

23.1 Recording of Financial Affairs

The directors must cause adequate accounting records to be kept to record properly the financial affairs and condition of the Company and to comply with the *Business Corporations Act.*

23.2 Inspection of Accounting Records

Unless the directors determine otherwise, or unless otherwise determined by ordinary resolution, no shareholder of the Company is entitled to inspect or obtain a copy of any accounting records of the Company.

24. NOTICES

24.1 Method of Giving Notice

Unless the *Business Corporations Act* or these Articles provides otherwise, a notice, statement, report or other record required or permitted by the *Business Corporations Act* or these Articles to be sent by or to a person may be sent by any one of the following methods:

(1) mail addressed to the person at the applicable address for that person as follows:

(a) for a record mailed to a shareholder, the shareholder's registered address;

(b) for a record mailed to a director or officer, the prescribed address for mailing shown for the director or officer in the records kept by the Company or the mailing address provided by the recipient for the sending of that record or records of that class;

(c) in any other case, the mailing address of the intended recipient;

(2) delivery at the applicable address for that person as follows, addressed to the person:

(a) for a record delivered to a shareholder, the shareholder's registered address;

(b) for a record delivered to a director or officer, the prescribed address for delivery shown for the director or officer in the records kept by the Company or the delivery address provided by the recipient for the sending of that record or records of that class;

(c) in any other case, the delivery address of the intended recipient;

(3) sending the record by fax to the fax number provided by the intended recipient for the sending of that record or records of that class;

(4) sending the record by email to the email address provided by the intended recipient for the sending of that record or records of that class;

(5) physical delivery to the intended recipient.

24.2 Deemed Receipt of Mailing

A record that is mailed to a person by ordinary mail to the applicable address for that person referred to in Article 24.1 is deemed to be received by the person to whom it was mailed on the day, Saturdays, Sundays and holidays excepted, following the date of mailing.

24.3 Certificate of Sending

A certificate signed by the secretary, if any, or other officer of the Company or of any other corporation acting in that behalf for the Company stating that a notice, statement, report or other record was addressed as required by Article 24.1, prepaid and mailed or otherwise sent as permitted by Article 24.1 is conclusive evidence of that fact.

24.4 Notice to Joint Shareholders

A notice, statement, report or other record may be provided by the Company to the joint shareholders of a share by providing the notice to the joint shareholder first named in the central securities register in respect of the share.

24.5 Notice to Trustees

A notice, statement, report or other record may be provided by the Company to the persons entitled to a share in consequence of the death, bankruptcy or incapacity of a shareholder by:

(1) mailing the record, addressed to them:

(a) by name, by the title of the legal personal representative of the deceased or incapacitated shareholder, by the title of trustee of the bankrupt shareholder or by any similar description; and

(b) at the address, if any, supplied to the Company for that purpose by the persons claiming to be so entitled; or

(2) if an address referred to in paragraph (l)(b) has not been supplied to the Company, by giving the notice in a manner in which it might have been given if the death, bankruptcy or incapacity had not occurred.

25. Seal

25.1 Who May Attest Seal

Except as provided in Articles 25.2 and 25.3, the Company's seal, if any, must not be impressed on any record except when that impression is attested by the signatures of:

(1) any two directors;

(2) any officer, together with any director;

(3) if the Company only has one director, that director; or

(4) any one or more directors or officers or persons as may be determined by the directors.

25.2 Sealing Copies

For the purpose of certifying under seal a certificate of incumbency of the directors or officers of the Company or a true copy of any resolution or other document, despite Article 25.1, the impression of the seal may be attested by the signature of any director or officer.

25.3 Mechanical Reproduction of Seal

The directors may authorize the seal to be impressed by third parties on share certificates or bonds, debentures or other securities of the Company as they may determine appropriate from time to time. To enable the seal to be impressed on any share certificates or bonds, debentures or other securities of the Company, whether in definitive or interim form, on which facsimiles of any of the signatures of the directors or officers of the Company are, in accordance with the *Business Corporations Act* or these Articles, printed or otherwise mechanically reproduced, there may be delivered to the person employed to engrave, lithograph or print such definitive or interim share certificates or bonds, debentures or other securities one or more unmounted dies reproducing the seal and the chair of the board or any senior officer together with the secretary, treasurer, secretary-treasurer, an assistant secretary, an assistant treasurer or an assistant secretary-treasurer may in writing authorize such person to cause the seal to be impressed on such definitive or interim share certificates or bonds, debentures or other securities by the use of such dies. Share certificates or bonds, debentures or other securities to which the seal has been so impressed are for all purposes deemed to be under and to bear the seal impressed on them.

26. Prohibitions

26.1 Definitions

In this Article 26:

(1) "designated security" means:

(a) a voting security of the Company;

(b) a security of the Company that is not a debt security and that carries a residual right to participate in the earnings of the Company or, on the liquidation or winding up of the Company, in its assets; or

(c) a security of the Company convertible, directly or indirectly, into a security described in paragraph (a) or (b);

(2) "security" has the meaning assigned in the *Securities Act* (British Columbia);

(3) "voting security" means a security of the Company that:

(a) is not a debt security, and

(b) carries a voting right either under all circumstances or under some circumstances that have occurred and are continuing.

26.2 Application

Article 26.3 does not apply to the Company if and for so long as it is a public company or a pre-existing reporting company which has the Statutory Reporting Company Provisions as part of its Articles or to which the Statutory Reporting Company Provisions apply.

26.3 Consent Required for Transfer of Shares or Designated Securities

No share or designated security may be sold, transferred or otherwise disposed of without the consent of the directors and the directors are not required to give any reason for refusing to consent to any such sale, transfer or other disposition.

27. Change of Registered and Records Offices

The Company may appoint or change its registered and records offices, or either of them, and the agent responsible therefor, at any time by resolution of the directors. After the appointment of the first registered or records office agent, such agent may terminate its appointment by written notice to any director or officer of the Company sent to the last known address of such director or officer. The Company will then designate a new registered or records office or offices within ten (10) days of receipt or deemed receipt of such notice, failing which the agent shall be entitled on behalf of the Company (but not obliged) to execute and file a Notice to Change Offices with the Registrar of Companies, changing the registered and records office or offices to the last known address of the President of the Company.

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BC Registry Services

Mailing Address:
PO BOX 9431 Stn Prov Govt.
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard St.
Victoria BC
250 356-8626

CERTIFIED COPY
Of a Document filed with the Province of
British Columbia Registrar of Companies

RON TOWNSHEND
May 31,2011

Incorporation Application

FORM 1
BUSINESS CORPORATIONS ACT
Section 10

FILING DETAILS:	*Incorporation Application for:* **APAC RESOURCES INC.**
	Incorporation Number: **BC0911882**
Filed Date and Time:	**May 31, 2011 03:04 PM Pacific Time**
Recognition Date and Time:	**Incorporated on May 31, 2011 03:04 PM Pacific Time**

INCORPORATION APPLICATION

Name Reservation Number:

NR0707944

Name Reserved:

APAC RESOURCES INC.

INCORPORATION EFFECTIVE DATE:

The incorporation is to take effect at the time that this application is filed with the Registrar.

INCORPORATOR INFORMATION

Last Name, First Name, Middle Name:
COLTURA, ROBERT

Mailing Address:
9285 - 203B STREET
LANGLEY BC V1M 2L9
CANADA

COMPLETING PARTY

Name, First Name, Middle Name:
Salley, Louis P.

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Completing Party Statement

I, Louis P. Salley, the completing party, have examined the articles and the incorporation agreement applicable to the company that is to be incorporated by the filing of the Incorporation Application and confirm that:

a) the Articles and the Incorporation Agreement both contain a signature line for each person identified as an incorporator in the Incorporation Application with the name of that person set out legibly under the signature lines,

b) an original signature has been placed on each of those signature lines, and

c) I have no reason to believe that the signature placed on a signature line is not the signature of the person whose name is set out under that signature line.

NOTICE OF ARTICLES

Name of Company:

APAC RESOURCES INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Delivery Address:
SUITE 1750 1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

DIRECTOR INFORMATION

Last Name, First Name, Middle Name:
MINNI, JERRY A.

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Last Name, First Name, Middle Name:
COLTURA, ROBERT

Mailing Address:
9285 - 203B STREET
LANGLEY BC V1M 2L9
CANADA

Delivery Address:
9285 - 203B STREET
LANGLEY BC V1M 2L9
CANADA

AUTHORIZED SHARE STRUCTURE

1.	No Maximum	Common Shares	Without Par Value Without Special Rights or Restrictions attached

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BC Registry Services

Mailing Address:
PO BOX 9431 Stn Prov Govt.
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard St.
Victoria BC
250 356-8626

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Of a Document filed with the Province of
British Columbia Registrar of Companies

RON TOWNSHEND
May 31,2011

Notice of Articles

BUSINESS CORPORATIONS ACT

This Notice of Articles was issued by the Registrar on: May 31, 2011 03:04 PM Pacific Time

Incorporation Number: **BC0911882**

Recognition Date and Time: Incorporated on May 31, 2011 03:04 PM Pacific Time

NOTICE OF ARTICLES

Name of Company:

APAC RESOURCES INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Delivery Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

DIRECTOR INFORMATION

L Name, First Name, Middle Name:
MINNI, JERRY A.

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Last Name, First Name, Middle Name:
COLTURA, ROBERT

Mailing Address:
9285 - 203B STREET
LANGLEY BC V1M 2L9
CANADA

Delivery Address:
9285 - 203B STREET
LANGLEY BC V1M 2L9
CANADA

AUTHORIZED SHARE STRUCTURE

1. No Maximum	Common Shares	Without Par Value Without Special Rights or Restrictions attached

Number: BC0911882

BRITISH COLUMBIA

CERTIFICATE
OF

CHANGE OF NAME

BUSINESS CORPORATIONS ACT

I Hereby Certify that APAC RESOURCES INC. changed its name to XORTX THERAPEUTICS INC. on January 9, 2018 at 01:56 PM Pacific Time.

ELECTRONIC CERTIFICATE

Issued under my hand at Victoria, British Columbia
On January 9, 2018

CAROL PREST
Registrar of Companies
Province of British Columbia
Canada

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
1 877 526-1526

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Of a Document filed with the Province of
British Columbia Registrar of Companies

CAROL PREST

Notice of Articles

BUSINESS CORPORATIONS ACT

This Notice of Articles was issued by the Registrar on: January 9, 2018 01:56 PM Pacific Time

Incorporation Number: **BC0911882**

Recognition Date and Time: Incorporated on May 31, 2011 03:04 PM Pacific Time

NOTICE OF ARTICLES

Name of Company:

XORTX THERAPEUTICS INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Delivery Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

DIRECTOR INFORMATION

Last Name, First Name, Middle Name:
Butrenchuk, Stephen B.

Mailing Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Delivery Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Last Name, First Name, Middle Name:
MINNI, JERRY A.

Mailing Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Last Name, First Name, Middle Name:
COLTURA, ROBERT

Mailing Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

Delivery Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

RESOLUTION DATES:

Date(s) of Resolution(s) or Court Order(s) attaching or altering Special Rights and Restrictions attached to a class or a series of shares:

September 25, 2013
August 9, 2017

AUTHORIZED SHARE STRUCTURE

1. No Maximum	CommonShares	Without Par Value Without Special Rights or Restrictions attached

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
1 877 526-1526

Cover Sheet

XORTX THERAPEUTICS INC.

Confirmation of Service

Form Filed:	Notice of Alteration
Date and Time of Filing:	January 9, 2018 01:56 PM Pacific Time
Alteration Effective Date:	The alteration is to take effect at the time that this application is filed with the Registrar.
Name of Company:	XORTX THERAPEUTICS INC.
Incorporation Number:	**BC0911882**

This package contains:

- Certified Copy of the Notice of Articles
- Certificate of Name Change

Check your documents carefully to ensure there are no errors or omissions. If errors or omissions are discovered, please contact the Corporate Registry for instructions on how to correct the errors or omissions.

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
1 877 526-1526

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British Columbia Registrar of Companies

CAROL PREST

Notice of Articles

BUSINESS CORPORATIONS ACT

This Notice of Articles was issued by the Registrar on: January 10, 2018 12:01 AM Pacific Time

Incorporation Number: **BC0911882**

Recognition Date and Time: Incorporated on May 31, 2011 03:04 PM Pacific Time

NOTICE OF ARTICLES

Name of Company:

XORTX THERAPEUTICS INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 2400
745 THURLOW STREET
VANCOUVER BC V6E0 C5
CANADA

Delivery Address:
SUITE 2400
745 THURLOW STREET
VANCOUVER BC V6E 0C5
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 2400
745 THURLOW STREET
VANCOUVER BC V6E 0C5
CANADA

Delivery Address:
SUITE 2400
745 THURLOW STREET
VANCOUVER BC V6E 0C5
CANADA

DIRECTOR INFORMATION

Last Name, First Name, Middle Name:
Rowlands, Bruce W.

Mailing Address:
201 BAIN AVENUE
TORONTO ON M4K 1E9
CANADA

Delivery Address:
201 BAIN AVENUE
TORONTO ON M4K1E9
CANADA

Last Name, First Name, Middle Name:
Davidoff, Allen

Mailing Address:
29 ASPEN MEADOWS PARK SW
CALGARY AB T3H 5Z7
CANADA

Delivery Address:
29 ASPEN MEADOWS PARK SW
CALGARY AB T3H 5Z7
CANADA

Last Name, First Name, Middle Name:
Moore, Alan F.

Mailing Address:
6060 ROLLING ROAD DRIVE
PINECREST FL 33156
UNITED STATES

Delivery Address:
6060 ROLLING ROAD DRIVE
PINECREST FL 33156
UNITED STATES

RESOLUTION DATES:

Date(s) of Resolution(s) or Court Order(s) attaching or altering Special Rights and Restrictions attached to a class or a series of shares:

September 25, 2013
August 9, 2017

AUTHORIZED SHARE STRUCTURE

1. No Maximum	Common Shares	Without Par Value Without Special Rights or Restrictions attached

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
1 877 526-1526

CERTIFIED COPY
Of a Document filed with the Province of
British Columbia Registrar of Companies

CAROL PREST

Notice of Articles

BUSINESS CORPORATIONS ACT

This Notice of Articles was issued by the Registrar on: January 9, 2018 07:32 PM Pacific Time

Incorporation Number: **BC0911882**

Recognition Date and Time: Incorporated on May 31, 2011 03:04 PM Pacific Time

NOTICE OF ARTICLES

Name of Company:

XORTX THERAPEUTICS INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Delivery Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

DIRECTOR INFORMATION

Last Name, First Name, Middle Name:
Rowlands, Bruce W.

Mailing Address:
201 BAIN AVENUE
TORONTO ON M4K 1E9
CANADA

Delivery Address:
201 BAIN AVENUE
TORONTO ON M4K1E9
CANADA

Last Name, First Name, Middle Name:
Davidoff, Allen

Mailing Address:
29 ASPEN MEADOWS PARK SW
CALGARY AB T3H 5Z7
CANADA

Delivery Address:
29 ASPEN MEADOWS PARK SW
CALGARY AB T3H 5Z7
CANADA

Last Name, First Name, Middle Name:
Moore, Alan F.

Mailing Address:
6060 ROLLING ROAD DRIVE
PINECREST FL 33156
UNITED STATES

Delivery Address:
6060 ROLLING ROAD DRIVE
PINECREST FL 33156
UNITED STATES

RESOLUTION DATES:

Date(s) of Resolution(s) or Court Order(s) attaching or altering Special Rights and Restrictions attached to a class or a series of shares:

September 25, 2013
August 9, 2017

AUTHORIZED SHARE STRUCTURE

1. No Maximum	Common Shares	Without Par Value Without Special Rights or Restrictions attached

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
1 877 526-1526

Cover Sheet

XORTX THERAPEUTICS INC.

Confirmation of Service

Form Filed:	Notice of Change of Directors
Date and Time of Filing:	January 9, 2018 07:32 PM Pacific Time
Name of Company:	XORTX THERAPEUTICS INC.
Incorporation Number:	**BC0911882**

This package contains:

- Certified Copy of the Notice of Articles

Check your documents carefully to ensure there are no errors or omissions. If errors or omissions are discovered, please contact the Corporate Registry for instructions on how to correct the errors or omissions.

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
1 877 526-1526

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Of a Document filed with the Province of
British Columbia Registrar of Companies

CAROL PREST

Notice of Articles

BUSINESS CORPORATIONS ACT

This Notice of Articles was issued by the Registrar on: May 13, 2014 03:12 PM Pacific Time

Incorporation Number: **BC0911882**

Recognition Date and Time: Incorporated on May 31, 2011 03:04 PM Pacific Time

NOTICE OF ARTICLES

Name of Company;

APAC RESOURCES INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Delivery Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

DIRECTOR INFORMATION

Last Name, First Name, Middle Name:
Butrenchuk, Stephen B.

Mailing Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Delivery Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Last Name, First Name, Middle Name:
MINNI, JERRY A.

Mailing Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Last Name, First Name, Middle Name:
COLTURA, ROBERT

Mailing Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

Delivery Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

RESOLUTION DATES:

Date(s) of Resolution(s) or Court Order(s) attaching or altering Special Rights and Restrictions attached to a class or a series of shares:

September 25, 2013

AUTHORIZED SHARE STRUCTURE

1. No Maximum	Common Shares	Without Par Value Without Special Rights or Restrictions attached

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
250 356-8626

CERTIFIED COPY
Of a Document filed with the Province of
British Columbia Registrar of Companies

Notice of Articles

BUSINESS CORPORATIONS ACT

CAROL PREST

This Notice of Articles was issued by the Registrar on: March 14, 2014 12:24 PM Pacific Time

Incorporation Number: **BC0911882**

Recognition Date and Time: Incorporated on May 31, 2011 03:04 PM Pacific Time

NOTICE OF ARTICLES

Name of Company:

APAC RESOURCES INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Delivery Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

DIRECTOR INFORMATION

Last Name, First Name, Middle Name:
Butrenchuk, Stephen B.

Mailing Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Delivery Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Last Name, First Name, Middle Name:
MINNI, JERRY A.

Mailing Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Last Name, First Name, Middle Name:
COLTURA, ROBERT

Mailing Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

Delivery Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

Last Name, First Name, Middle Name:
COCKS, JEFFREY

Mailing Address:
2543 NUTTAL DRIVE
NANOOSE BAY BC V9P 9B4
CANADA

Delivery Address:
2543 NUTTAL DRIVE
NANOOSE BAY BC V9P 9B4
CANADA

RESOLUTION DATES:
Date(s) of Resolution(s) or Court Order(s) attaching or altering Special Rights and Restrictions attached to a class or a series of shares:

September 25, 2013

AUTHORIZED SHARE STRUCTURE

1. No Maximum	CommonShares	Without Par Value Without Special Rights or Restrictions attached

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
250 356-8626

Cover Sheet

APAC RESOURCES INC.

Confirmation of Service

Form Filed:	Notice of Change of Directors
Date and Time of Filing:	March 14, 2014 12:24 PM Pacific Time
Name of Company:	APAC RESOURCES INC.
Incorporation Number:	**BC0911882**

This package contains:

- Certified Copy of the Notice of Articles

Check your documents carefully to ensure there are no errors or omissions. If errors or omissions are discovered, please contact the Corporate Registry for instructions on how to correct the errors or omissions.

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
250 356-8626

CERTIFIED COPY
Of a Document filed with the Province of
British Columbia Registrar of Companies

CAROL PREST

Notice of Articles

BUSINESS CORPORATIONS ACT

This Notice of Articles was issued by the Registrar on: October 11, 2013 12:55 PM Pacific Time

Incorporation Number: **BC0911882**

Recognition Date and Time: Incorporated on May 31, 2011 03:04 PM Pacific Time

NOTICE OF ARTICLES

Name of Company:

APAC RESOURCES INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Delivery Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

DIRECTOR INFORMATION

Last Name, First Name, Middle Name:
COCKS, JEFFREY

Mailing Address:
2543 NUTTAL DRIVE
NANOOSEBAY BC V9P 9B4
CANADA

Delivery Address:
2543 NUTTAL DRIVE
NANOOSE BAY BC V9P 9B4
CANADA

Last Name, First Name, Middle Name:
DAVID, MICHEL

Mailing Address:
153A AV PERREAULT
VAL-D'OR QC J9P 2H1
CANADA

Delivery Address:
153A AV PERREAULT
VAL-D'OR QC J9P 2H1
CANADA

Last Name, First Name, Middle Name:
Butrenchuk, Stephen B.

Mailing Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Delivery Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Last Name, First Name, Middle Name:
MINNI, JERRY A.

Mailing Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Last Name, First Name, Middle Name:
COLTURA, ROBERT

Mailing Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

Delivery Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

RESOLUTION DATES:

Date(s) of Resolution(s) or Court Order(s) attaching or altering Special Rights and Restrictions attached to a class or a series of shares:

September 25, 2013

AUTHORIZED SHARE STRUCTURE

1. No Maximum	Common Shares	Without Par Value Without Special Rights or Restrictions attached

BRITISH COLUMBIA

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
250 356-8626

RECEIPT

This is your receipt

Form Filed:	Notice of Alteration
Company Number:	BC0911882
Business Number:	815715511BC0001
Company Name:	APAC RESOURCES INC.
Filing Date and Time:	October 11, 2013 12:55 PM Pacific Time
Notification Method:	EMAIL
Submitting Party Name:	BOWES, PAUL (P)
Fee:	$100.00
Service Charge:	$1.50
Subtotal:	$101.50
Service Charge GST: (Access Point Information Canada Ltd.)	$0.08
Total:	$101.58
Payment Method:	Deposit Account
Folio Number:	1171001
BC OnLine Account Number:	980061

BC0911882

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
250 356-8626

Cover Sheet

APAC RESOURCES INC.

Confirmation of Service

Form Filed:	Notice of Alteration
Date and Time of Filing:	October 11,2013 12:55 PM Pacific Time
Alteration Effective Date:	The alteration is to take effect at the time that this application is filed with the Registrar.
Name of Company:	APAC RESOURCES INC.
Incorporation Number:	**BC0911882**

This package contains:

- Certified Copy of the Notice of Articles

Check your documents carefully to ensure there are no errors or omissions. If errors or omissions are discovered, please contact the Corporate Registry for instructions on how to correct the errors or omissions.

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
250 356-8626

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Of a Document filed with the Province of
British Columbia Registrar of Companies

CAROL PREST

Notice of Articles

BUSINESS CORPORATIONS ACT

This Notice of Articles was issued by the Registrar on: October 11, 2013 12:46 PM Pacific Time

Incorporation Number: **BC0911882**

Recognition Date and Time: Incorporated on May 31, 2011 03:04 PM Pacific Time

NOTICE OF ARTICLES

Name of Company:

APAC RESOURCES INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Delivery Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

DIRECTOR INFORMATION

Last Name, First Name, Middle Name:
COCKS, JEFFREY

Mailing Address:
2543 NUTTAL DRIVE
NANOOSE BAY BC V9P 9B4
CANADA

Delivery Address:
2543 NUTTAL DRIVE
NANOOSE BAY BC V9P 9B4
CANADA

Last Name, First Name, Middle Name:
DAVID, MICHEL

Mailing Address:
153A AV PERREAULT
VAL-D'OR QC J9P 2H1
CANADA

Delivery Address:
153A AV PERREAULT
VAL-D'OR QC J9P 2H1
CANADA

Last Name, First Name, Middle Name:
Butrenchuk, Stephen B.

Mailing Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Delivery Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K 4T4
CANADA

Last Name, First Name, Middle Name
MINNI, JERRY A.

Mailing Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Last Name, First Name, Middle Name:
COLTURA, ROBERT

Mailing Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

Delivery Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

AUTHORIZED SHARE STRUCTURE

1. No Maximum	CommonShares	Without Par Value Without Special Rights or Restrictions attached

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
250 356-8626

Notice of Alteration

FORM 11
BUSINESS CORPORATIONS ACT
Section 257

Filed Date and Time:	**October 11, 2013 12:55 PM Pacific Time**
Alteration Date and Time:	**Notice of Articles Altered on October 11, 2013 12:55 PM Pacific Time**

NOTICE OF ALTERATION

Incorporation Number:

BC0911882

Name of Company:

APAC RESOURCES INC.

ALTERATION EFFECTIVE DATE:

The alteration is to take effect at the time that this application is filed with the Registrar.

ADD A RESOLUTION DATE:

Date(s) of Resolution(s) or Court Order(s) attaching or altering Special Rights and Restrictions attached to a class or a series of shares:

New Resolution Date:

September 25, 2013

AUTHORIZED SHARE STRUCTURE

1. No Maximum	Common Shares	Without Par Value Without Special Rights or Restrictions attached

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
250 356-8626

Cover Sheet

APAC RESOURCES INC.

Confirmation of Service

Form Filed:	Notice of Change of Directors
Date and Time of Filing:	October 11, 2013 12:46 PM Pacific Time
Name of Company:	APAC RESOURCES INC.
Incorporation Number:	**BC0911882**

This package contains:

- Certified Copy of the Notice of Articles

Check your documents carefully to ensure there are no errors or omissions. If errors or omissions are discovered, please contact the Corporate Registry for instructions on how to correct the errors or omissions.

BC Registry Services

Mailing Address:
PO Box 9431 Stn Prov Govt
Victoria BC V8W 9V3
www.corporateonline.gov.bc.ca

Location:
2nd Floor - 940 Blanshard Street
Victoria BC
250 356-8626

CERTIFIED COPY
Of a Document filed with the Province of
British Columbia Registrar of Companies

ANGELO COCCO

Notice of Articles

BUSINESS CORPORATIONS ACT

This Notice of Articles was issued by the Registrar on: June 22, 2012 09:03 AM Pacific Time

Incorporation Number **BC0911882**

Recognition Date and Time: Incorporated on May 31, 2011 03:04 PM Pacific Time

NOTICE OF ARTICLES

Name of Company:

APAC RESOURCES INC.

REGISTERED OFFICE INFORMATION

Mailing Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

Delivery Address:
SUITE 200
551 HOWE STREET
VANCOUVER BC V6C 2C2
CANADA

RECORDS OFFICE INFORMATION

Mailing Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

Delivery Address:
SUITE 1750
1185 WEST GEORGIA STREET
VANCOUVER BC V6E 4E6
CANADA

DIRECTOR INFORMATION

Last Name, First Name, Middle Name:
Butrenchuk, Stephen B.

Mailing Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K4T4
CANADA

Delivery Address:
34 TEMPLE CRESCENT WEST
LETHBRIDGE AB T1K4T4
CANADA

Last Name, First Name, Middle Name:
Galine, William

Mailing Address:
600 - 595 HOWE STREET
VANCOUVER BC V6C 2T5
CANADA

Delivery Address:
600 - 595 HOWE STREET
VANCOUVER BC V6C2T5
CANADA

Last Name, First Name, Middle Name:
MINNI, JERRY A.

Mailing Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C2C2
CANADA

Delivery Address:
SUITE 200 - 551 HOWE STREET
VANCOUVER BC V6C2C2
CANADA

Last Name, First Name, Middle Name:
COLTURA, ROBERT

Mailing Address:
9285 203B STREET
LANGLEY BC V1M 2L9
CANADA

Delivery Address:
9285 203B STREET
LANGLEY BC V1M2L9
CANADA

AUTHORIZED SHARE STRUCTURE

1. No Maximum	Common Shares	Without Par Value Without Special Rights or Restrictions attached

Exhibit 4.2

COMMON SHARE PURCHASE WARRANT

XORTX THERAPEUTICS, INC.

Warrant Shares: _____ Original Issue Date: [__], 2021

THIS COMMON SHARE PURCHASE WARRANT (the "Warrant") certifies that, for value received, _____ or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "Initial Exercise Date") and on or prior to 5:00 p.m. (Eastern time) on __, 202[ ] (the "Termination Date") but not thereafter, to subscribe for and purchase from XORTX Therapeutics, Inc., a company organized under the laws of British Columbia (the "Company"), up to _____ Common Shares (as subject to adjustment hereunder, the "Warrant Shares"). The purchase price of one Common Share under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b). This Warrant is being issued pursuant to that certain Underwriting Agreement, dated [__], 2021, between the Company and A.G.P./Alliance Global Partners, as representative of the underwriters thereunder (the "Underwriting Agreement"). This Warrant shall initially be issued and maintained in the form of a security held in book-entry form and the Depository Trust Company or its nominee ("DTC") shall initially be the sold registered holder of the Warrant, subject a Holder's right to elect to receive the Warrant in certificated form pursuant to the terms of the Warrant Agent Agreement, in which case this sentence shall not apply.

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Bid Price" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Shares are then listed or quoted on a Trading Market, the bid price of the Common Shares for the time in question (or the nearest preceding date) on the Trading Market on which the Common Shares are then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (Eastern time) to 4:02 p.m. (Eastern time)), (b) if OTCQX or OTCQB is not a Trading Market, the volume weighted average price of the Common Shares for such date (or the nearest preceding date) on OTCQX or OTCQB, as applicable, (c) if the Common Shares are not then listed or quoted for trading on OTCQX or OTCQB and if prices for the Common Shares are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Shares so reported, or (d) in all other cases, the fair market value of a Common Share as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Commission" means the United States Securities and Exchange Commission.

"Common Share" means the common share of the Company, no par value, and any other class of securities into which such securities may hereafter be reclassified or changed.

"Common Share Equivalents" means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Shares, including, without limitation, any debt, preferred shares, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Shares.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"Person" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"Registration Statement" means the Company's registration statement on Form S-1 (File No. 333-[ ]).

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Subsidiary" means any subsidiary of the Company and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

"Trading Day" means a day on which the Common Shares are traded on a Trading Market.

"Trading Market" means any of the following markets or exchanges on which the Common Shares are listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, or the OTCQX or OTCQB markets (or any successors to any of the foregoing).

"Transfer Agent" means [ ], the current transfer agent of the Company, with a mailing address of [ ] and a facsimile number of [ ], and any successor transfer agent of the Company.

"Warrant Agent Agreement " means that certain warrant agent agreement, dated on or about the Initial Exercise Date, between the Company and the Warrant Agent.

"Warrant Agent" means [the Transfer Agent] and any successor warrant agent of the Company.

"VWAP" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Shares are then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Shares for such date (or the nearest preceding date) on the Trading Market on which the Common Shares are then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (Eastern time) to 4:02 p.m. (Eastern time)), (b) if OTCQX or OTCQB is not a Trading Market, the volume weighted average price of the Common Shares for such date (or the nearest preceding date) on OTCQX or OTCQB, as applicable, (c) if the Common Shares are not then listed or quoted for trading on OTCQX or OTCQB and if prices for the Common Shares are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Shares so reported, or (d) in all other cases, the fair market value of a share of Common Shares as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

"Warrants" means this Warrant and other Common Share purchase warrants issued by the Company pursuant to the Registration Statement.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Original Issue Date and on or before the Termination Date by delivery to the Company of a duly executed PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the "Notice of Exercise"). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier's check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

Notwithstanding the foregoing in this Section 2(a), a holder whose interest in this Warrant is a beneficial interest in certificate(s) representing this Warrant held in book entry form through DTC (or another established clearing corporation performing similar functions), shall effect exercises made pursuant to this Section 2(a) by delivering to DTC (or such other clearing corporation, as applicable) the appropriate instruction form for exercise, complying with the procedures to effect exercise that are required by DTC (or such other clearing corporation, as applicable), subject to the Holder's right to elect to receive a Warrant in certificated form pursuant to the terms of the Warrant Agent Agreement, in which case this sentence shall not apply.

b) Exercise Price. The exercise price per Common Share under this Warrant shall be $[___], subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(68) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Shares on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder's execution of the applicable Notice of Exercise if such Notice of Exercise is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of "regular trading hours" on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of "regular trading hours" on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's or its designee's balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the "Warrant Share Delivery Date"). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each $1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Shares on the date of the applicable Notice of Exercise), $10 per Trading Day (increasing to $20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Common Shares as in effect on the date of delivery of the Notice of Exercise.

ii. Delivery of New Warrants upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, Common Shares to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the Common Shares so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of Common Shares that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Shares having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted exercise of Common Shares with an aggregate sale price giving rise to such purchase obligation of $10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder $1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver Common Shares upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of Common Shares beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of Common Shares issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of Common Shares which would be issuable upon (i) exercise of the remaining, non-exercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or non-converted portion of any other securities of the Company (including, without limitation, any other Common Share Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding Common Shares, a Holder may rely on the number of outstanding Common Shares as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of Common Shares outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of Common Shares then outstanding. In any case, the number of outstanding Common Shares shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding Common Shares was reported. The "Beneficial Ownership Limitation" shall be 4.99% (or, upon election by a Holder prior to the issuance of any Warrants, 9.99%) of the number of Common Shares outstanding immediately after giving effect to the issuance of Common Shares issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of Common Shares outstanding immediately after giving effect to the issuance of Common Shares upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on its Common Shares or any other equity or equity equivalent securities payable in Common Shares (which, for avoidance of doubt, shall not include any Common Shares issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding Common Shares into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding Common Shares into a smaller number of shares, or (iv) issues by reclassification of the Common Shares any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of Common Shares (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of Common Shares outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Intentionally omitted.

c) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Share Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Shares (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of Common Shares acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of Common Shares are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such Common Shares as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of Common Shares, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of Common Shares acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of Common Shares are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any Common Shares as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

e) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Shares are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Shares, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Shares or any compulsory share exchange pursuant to which the Common Shares are effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding Common Shares (not including any Common Shares held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of Common Shares of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of Common Shares for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one Common Share in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Shares are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity (as defined below) shall, at the Holder's option, exercisable at any time concurrently with, or within thirty (30) days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable Fundamental Transaction), purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value (as defined below) of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, if the Fundamental Transaction is not within the Company's control, including not approved by the Company's Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Fundamental Transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Shares of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Shares are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction; provided, further, that if holders of Common Shares of the Company are not offered or paid any consideration in such Fundamental Transaction, such holders of Common Shares will be deemed to have received common shares of the Successor Entity (which may be the Company following such Fundamental Transaction) in such Fundamental Transaction. "Black Scholes Value" means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the "OV" function on Bloomberg, L.P. ("Bloomberg") determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable contemplated Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the 100 day volatility obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the public announcement of the applicable contemplated Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the greater of (i) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (ii) the greater of (x) the highest VWAP during the period beginning on the Trading Day immediately preceding the announcement of the applicable Fundamental Transaction (or the consummation of the applicable Fundamental Transaction, if earlier) and ending on the Trading Day of the Holder's request pursuant to this Section 3(e), and (D) a remaining option time equal to the time between the date of the public announcement of the applicable contemplated Fundamental Transaction and the Termination Date and (E) a zero cost of borrow. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds within the later of (i) five Business Days of the Holder's election and (ii) the date of consummation of the Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(e) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the Common Shares acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the Common Shares pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein.

f) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of Common Shares deemed to be issued and outstanding as of a given date shall be the sum of the number of Common Shares (excluding treasury shares, if any) issued and outstanding.

g) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Shares, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Shares, (C) the Company shall authorize the granting to all holders of the Common Shares rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Shares, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Shares are converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by email to the Holder at its last email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Shares of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Shares of record shall be entitled to exchange their shares of the Common Shares for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

a) Transferability. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. If this Warrant is not held in global form through DTC (or any successor depositary), this Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer that may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Warrant Agent shall register this Warrant, upon records to be maintained by the Warrant Agent for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company and the Warrant Agent may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

a) No Rights as Stockholder until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a "cashless exercise" pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Shares a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Shares may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Non-waiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at XORTX Therapeutics, Inc., Suite 2400 – 745 Thurlow Street, Vancouver, British Columbia, Canada V6E 0C5, Attention: Allen Davidoff, Ph.D., Chief Executive Officer, telephone number: (403) 607-2621, email address: adavidoff@xortx.com, or such other address, telephone number or email address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (Eastern time) on any date, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (Eastern time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Shares or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company, on the one hand, and the Holder or the beneficial owner of this Warrant, on the other hand.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

o) Warrant Agent Agreement. If this Warrant is held in global form through DTC (or any successor depositary), this Warrant is issued subject to the Warrant Agent Agreement. To the extent any provision of this Warrant conflicts with the express provisions of the Warrant Agent Agreement, the provisions of this Warrant shall govern and be controlling.

****

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

XORTX THERAPEUTICS, INC.

By: _____

Name:
Title:

NOTICE OF EXERCISE

TO: XORTX THERAPEUTICS, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

☐ in lawful money of the United States; or

☐ if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in Section 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in Section 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

_____

The Warrant Shares shall be delivered to the following DWAC Account Number:

_____

_____

_____

[SIGNATURE OF HOLDER]

Name of Investing Entity: _____
Signature of Authorized Signatory of Investing Entity: _____
Name of Authorized Signatory: _____
Title of Authorized Signatory: _____
Date: _____

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Phone Number: _____

Email Address: _____

Dated: _____ ___, _____

Holder's Signature: _____

Holder's Address: _____

Exhibit 10.1

INVESTIGATOR INITIATED-CLINICAL TRIAL AGREEMENT

This Investigator-Initiated Clinical Trial Agreement ("Agreement") effective this 3rd day of August, 2020, (the "Effective Date") is by and between ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI, a non-profit corporation, having its principal offices at One Gustave L. Levy Place, New York, NY 10029 ("INSTITUTION") and XORTXTherapeutics ("COMPANY"), a Canadian corporation, having its principal offices at Suite 4000, 421-7 th Avenue Calgary, Alberta, Canada. INSTITUTION's faculty employee Steven Coca, M.D. ("PRINCIPAL INVESTIGATOR") shall be the Sponsor-Investigator under this Agreement, and shall conduct this Study as an employee of lnstitution and not as a party to this Agreement.

WHEREAS, the COMPANY wishes to fund and desires that the INSTITUTION undertake a clinical trial in the field of Nephrology and acute kidney injury due to COVID-19; and

WHEREAS, in furtherance of its scholarly, research, and advancing patient care interests, the INSTITUTION is willing to undertake such clinical trial upon the terms and conditions set forth below in a manner consistent with its status as a not-for-profit research and education institution;

NOW, THEREFORE, in consideration of the premises and the mutual covenants herein contained, the parties hereto agree as follows:

1. PRINCIPAL INVESTIGATOR

PRINCIPAL INVESTIGATOR agrees to conduct a clinical study ("Study") according to the protocol (Exhibit A, incorporated herein by this reference, "Protocol"), which has been approved by the INSTITUTION, its Institutional Review Board and the COMPANY. Any statement in the Protocol which is inconsistent with this Agreement is superseded by the Agreement. The PRINCIPAL INVESTIGATOR agrees to devote his/her reasonable efforts to perform the work required under this Agreement efficiently.

PRINCIPAL INVESTIGATOR and INSTITUTION represent that they have the requisite and necessary experience, equipment, facilities and personnel to conduct the Study properly.

2. CONDUCT OF THE STUDY

INSTITUTION and PRINCIPAL INVESTIGATOR agree to perform the Study according to the Protocol, and in accordance with all applicable rules and regulations. INSTITUTION shall ensure that an Institutional Review Board ("IRB"), established and constituted in accordance with applicable laws and regulations, oversees the conduct of the Study and is fully compliant with 21 C.F.R. § 56. INSTITUTION and PRINCIPAL INVESTIGATOR shall comply with the directives of the IRB respecting the conduct of the Study. Notwithstanding the foregoing, INSTITUTION and PRINCIPAL INVESTIGATOR agree not to implement any deviation from or changes to the Protocol without prior IRB approval, except as necessary to protect the safety, rights or welfare of a patient enrolled in the Study. COMPANY acknowledges that the primary mission of INSTITUTION is health care, education, research and the advancement of knowledge, and consequently, all services provided by INSTITUTION under this Agreement will be performed in a manner best suited to carry out that mission. INSTITUTION does not guarantee specific results of the Study.

3. COSTS & FUNDING

COMPANY shall provide funds to conduct the Study as described in this paragraph. Payment of the sums due under this agreement shall be made according to the Budget and Payment Schedule, attached as Exhibit(s) A and B.

It is agreed that payment of the sums due under this agreement shall be made payable to:

ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI (EIN # 13-6171197) and sent to:

Icahn School of Medicine at Mount Sinai

Division ofNephrology

One Gustave L. Levy Place, Box 1243

New York, NY 10029

Attention: Treneon Chan

4. TERM AND TERMINATION

a. This Agreement shall expire upon the earlier of the completion of the Study or three (3) years from the Effective Date (the "Term"). In the event that either party defaults or breaches any material provision of this Agreement, the other party may terminate this Agreement upon thirty (30) days written notice to the party in default or breach; provided, however, that if the party defaulting, breaching, or failing, within thirty (30) days of the receipt of such notice cures the said default, breach or failure; the Agreement will continue in force and effect.

b. This Agreement may be terminated by either party, upon immediate prior notice, if the authorization and approval to perform the Study in the United States is withdrawn by the FDA or, if the emergence of any adverse reaction or side effect with the drug administered or the device employed in the Study is of such magnitude or incidence in the opinion of either the COMPANY or INSTITUTION to support termination.

c. If either party should become insolvent or should make any assignment for the benefit of creditors, or should be adjudged bankrupt, or should file a petition in bankruptcy, or is named as debtor in an involuntary bankruptcy proceeding, or if a receiver or trustee of the property of either party is appointed, then this Agreement, at the option of the other party, will terminate, effective on the date notice of such te1mination is given.

d. Should COMPANY terminate this Agreement, COMPANY will reimburse INSTITUTION for all expenditures and non-cancelable commitments incurred prior to termination not to exceed the total amount of the Agreement.

e. In the event the PRINCIPAL INVESTIGATOR should leave the faculty at the INSTITUTION, and the parties cannot find a qualified replacement that is mutually acceptable, the INSTITUTION retains the option to terminate this Agreement.

5. NOTICES

Any notices given under this agreement shall be in writing and shall be deemed delivered when sent by first-class mail, postage prepaid, addressed to the parties as follows:

INSTITUTION

ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI
One Gustave L Levy Place, Box 1251
New York, New York
Attn: Rosaria McEntee, Director of Finance

COMPANY

XORTX Therapeutics Inc
Suite 4000, 721, 7th Avenue
Calgaiy, Alberta, T3H 5Z7
Attn: Allen Davidoff, CEO

With a copy to Principal Investigator:

ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI
Division ofNephrology
One Gustave L. Levy Place, Box 1243
New York, NY 10029
Attention: Treneon Chan

6. CONFIDENTIAL INFORMATION

"Confidential Information" means information that a party owns or controls and maintains as confidential that such party discloses (as the "Disclosing Party") to the other party (as the "Receiving Party") during the Term, including without limitation, any such information regarding products or services, research, data, prototypes, samples, software, inventions, processes, formulas, technology, designs, drawings, hardware configurations, business and marketing. For clarity, "Confidential Information" includes the foregoing information of a third party in possession of Disclosing Party, that Disclosing Party has a legal right to disclose to Receiving Party under terms of confidentiality as set forth herein.

The Receiving Party will:

a. use Disclosing Party's Confidential Infom1ation only in connection with the Study and only during the Term; for clarity the any allowed use of Confidential Information contained herein expressly excludes any use of Disclosing Party's Confidential Information for regulatory or patent filing purposes, or for initiation or pursuit of any proceeding to challenge the patentability, validity, or enforceability of any patent application or issued patent (or any portion thereof) that is owned or controlled by Disclosing Party (including e.g. via pre-issuance submissions, post grant review, or inter partes review). Any such excluded use is hereby deemed a material breach of this Agreement;

b. not disclose Disclosing Party's Confidential Information to any person other than those entitled to receipt under subsection d below without Disclosing Party' s prior written permission;

c. use at least the same degree of care to maintain the confidentiality of Disclosing Party's Confidential Information as the Receiving Party uses in maintaining the confidentiality of its own confidential information, but always at least a reasonable degree of care;

d. restrict disclosure of Disclosing Party's Confidential Information solely to those employees and faculty of Receiving Party having a reasonable need to know such Confidential information in order to accomplish the Study, provided however, that with respect to third party Confidential Information disclosed hereunder, such disclosure shall be pe1mitted only if and to the extent not prohibited by the Disclosing Party's agreement with such third party;

e. advise each such employee and faculty, before he or she receives access to the Confidential Information, of the obligations of Receiving Party under this Agreement, and require each such employee and faculty to comply with those obligations; for clarity, each Receiving Party shall be fully responsible to the Disclosing Party for such compliance by its employees and faculty; and

f. within fifteen (15) days of the sooner of: (i) the expiration or termination of this Agreement or; (ii) the written request of the Disclosing Party, return to Disclosing Party all documentation, copies, notes, diagrams, computer memory media and other materials containing any portion of the Disclosing Party's Confidential Information, or confirm to Disclosing Party in writing, the destruction of such materials, except for a single copy of such Confidential Information that the Receiving Party may keep solely for the purpose of monitoring its obligations under this Agreement.

This Agreement imposes no obligation on Receiving Party with respect to any portion of the Confidential Information received from Disclosing Party that Receiving Party demonstrates with competent written and/or electronic records: (a) was known to Receiving Party prior to disclosure by Disclosing Party, (b) is or becomes generally known or publicly available other than by unauthorized disclosure by Receiving Party or its employees or faculty, (c) is lawfully obtained by Receiving Party from a third party under no obligation of confidentiality, or (d) is independently developed by the Receiving Party without use of Confidential Information disclosed by the Disclosing Party, as demonstrated by written and/or electronic records created contemporaneously with such independent development. In addition, Receiving Party may disclose Confidential Information of Disclosing Party to the extent required by law, court order, or other legal authority with jurisdiction, provided that the Receiving Party promptly informs the Disclosing Party in writing of such requirement (to the extent legally permissible) and complies, at the Disclosing Party's written request and expense, with the Disclosing Party's legal efforts to prevent or limit the scope of such required disclosure. In the event such legally compelled disclosure is made as permitted hereunder, Receiving Party shall continue in all other ways to maintain the confidentiality obligations and use restrictions herein with respect to such information.

Nothing in this Agreement obligates Disclosing Party to disclose its Confidential Information, but to the extent it does so, Disclosing Party: (a)will disclose Confidential Information in a written document or machine readable media marked as "confidential" or if the disclosure takes oral or other intangible f01m, (b) will summarize such disclosure in a written memorandum marked "confidential" transmitted to Receiving Party within thirty (30) days of the intangible disclosure; *provided, however,* that failure to so mark or summarize Confidential Information shall not compromise or alter its confidential status if a reasonable person would recognize, based upon its content and/or the context of its disclosure, that such disclosure was intended as confidential.

All data and/or results generated by the PRINCIPAL INVESTIGATOR, or those under direct supervision of PRINCIPAL INVESTIGATOR while performing the Study (the "Study Results") are Confidential Information of INSTITUTION.

The obligations of this Section shall expire after termination or expiration of this Agreement.

7. PUBLICATION

The PRINCIPAL INVESTIGATOR is free to communicate and/or publish with respect to the Study being conducted hereunder without the prior approval of COMPANY. However, with respect to any proposed publication of the Study Results, the PRINCIPAL INVESTIGATOR agrees to submit to COMPANY a summary of the proposed publication at least thirty (30) days prior to the submission thereof for publication. The purposes for such prior submission are: (i) to provide COMPANY with the opportunity to review and comment on the contents of the proposed publication, and (ii) to identify any Confidential Information to be deleted from the proposed publication. COMPANY shal1 provide any comments to PRINCIPAL INVESTIGATOR or identify any of COMPANY's Confidential Info1mation to be deleted from the proposed publication within thirty (30) days of receipt of the proposed publication. At the end of the thirty (30) day period, INSTITUTION shall be free to proceed with publication. If the event deletion of COMPANY Confidential Information from the proposed publication will materially and adversely affect INSTITUTION's ability to support its scientific conclusions, COMPANY agrees to provide INSTITUTION alternative non-confidential information adequate to al1eviate such defects. No other release of any information relating to the Study which uses COMPANY's name or INSTITUTION's name (or any of the foregoing's employees, faculty, students, directors, trustees, officers, or other representatives) or any adaptation of any of the foregoing, shall be made to any news medium (including press releases) without prior written consent of the party whose name is to be used.

INSTITUTION will register Study with a public clinical trials registry in accordance with applicable laws and regulations.

8. INTELLECTUAL PROPERTY

a) **Ownership of Intellectual Property.** As used herein, **"Intellectual Property"** or **"IP"** means all technical information, inventions, developments, discoveries, Study Data, software, know-how, methods, techniques, formulae, processes and other prop1ietary property, whether or not patentable or copyrightable. It is expressly agreed that neither the COMPANY nor INSTITUTION transfers by operation of this Agreement to the other party any Intellectual Property owned by a party as of the commencement date of this Agreement or developed by a pai1y outside of the Study. As this Agreement is for an Investigator-Initiated Study, inventorship of any Intellectual Property shall be determined in accordance with inventorship principles of United States Patent Law. Any Intellectual Property first conceived and reduced to practice in performance of the Study during the Term solely by employees, agents, and/or independent contractors of INSTITUTION shall be the sole property of INSTITUTION **("Sole Inventions").** Any Intellectual Property first conceived jointly in the performance of the Study during the Term by at least one employee, agent, and/or independent contractor of INSTITUTION and at least one employee, agent, and/or independent contractor of COMPANY shall be jointly owned by COMPANY and INSTITUTION **("Joint Inventions").**

b) **Disclosure of Intellectual Property.** Mount Sinai's technology and business development office, Mount Sinai Innovation Partners ("MSIP"), will provide COMPANY with a confidential written disclosure of any Sole Invention or Joint Invention ("Invention Notice"), after MSIP's receipt of such disclosure from PRINCIPAL INVESTIGATOR, whether patentable or not, and COMPANY shall hold such Invention Notice strictly confidential. COMPANY will advise INSTITUTION in writing, no later than forty-five (45) days after receipt of such disclosure, whether it requests INSTITUTION to file and prosecute patent applications claiming such Sole Invention or Joint Invention. If Company does not request Mount Sinai to file and prosecute such patent applications, INSTITUTION may proceed with such preparation and prosecution at its own cost and expense; but such patent applications (and any patents resulting therefrom) will be excluded from COMPANY's option under set f011h below and, with respect to Joint Inventions, COMPANY will assign all of its rights therein promptly to INSTITUTION.

c) INSTITUTION will control the preparation and prosecution of all patent applications and the maintenance of all patents related to Joint Inventions and Sole Inventions. COMPANY will reimburse INSTITUTION within sixty (60) days of receipt of invoice for all documented expenses incurred in connection with the filing and prosecution of the patent applications and maintenance of the patents that COMPANY has requested INSTITUTION to prosecute hereunder.

d) In consideration of Sponsor's payment for intellectual property expenses as provided for herein, INSTITUTION will grant to COMPANY the exclusive option to negotiate a fee, milestone, and royalty bearing license to practice INSTITUTION's rights in Sole Inventions and Joint Inventions, including the right to make, use, sell, offer for sale and import any such inventions claimed or otherwise included therein, but only with respect to patent applications filed at COMPANY's request in accordance with the terms of this Agreement. Sponsor shall have one hundred and twenty (120) days after receipt of notice of such Sole Invention, to exercise such option by providing written notice to INSTITUION. INSTITUTION and COMPANY will negotiate in good faith to determine the terms of a license agreement as to each item of such intellectual property for which COMPANY has agreed to make payment for intellectual property expenses as provided for herein. If the parties fail to execute such a license agreement within six (6) months after disclosure of the Sole Inventions and/or Joint Inventions to COMPANY or if COMPANY fails to make payment for intellectual property expenses as provided for herein, then INSTITUTION will be free to license such intellectual property to any party upon terms that INSTITUTION deems appropriate, without any further obligation to COMPANY.

e) Any exclusive license granted to COMPANY pursuant to this Agreement will be subject to: (a) the licensee's obligation to pay related patent expenses directly to the responsible law firm under a client and billing agreement to be executed contemporaneously with such license; (b) the retained rights of INSTITUTION to use such rights for academic research, teaching, and patient care purposes and; (c) as applicable, to the rights of the United States government including as reserved under Public Laws 96-517, 97-256 and 98-620, codified at 35 U.S.C. 200-212, and any regulations issued thereunder.

9. INDEMNIFICATION

The COMPANY will defend, indemnify and hold harmless PRINCIPAL INVESTIGATOR and INSTITUTION, their trustees, officers, agents, and employees from any liability, loss or damage, they may suffer as the result of claims, demands, cases or judgments against them arising from the manufacture of any study drugs or devices provided by COMPANY to INSTITUTION for use in the Study, or arising from COMPANY's use of Study Results received from INSTITUTION, provided that (i) INSTITUTION promptly notifies COMPANY in writing after Institution receives notice of any claim, (ii) INSTITUTION is given the opportunity, at its option, to participate and associate with COMPANY in the control, defense and trial of any claim and related settlement negotiations COMPANY shall settle no action for which it indemnifies INSTITUTION without INSTITUTION's prior written consent, with respect to statements implicating liability or fault on the part of INSTITUTION or obligating INSTITUTION to perform or refrain from any act (other than payment on claims to be indemnified in full by COMPANY).

10. RELATIONSHIP OF THE PARTIES

The relationship of COMPANY and INSTITUTION established by this Agreement is that of independent contractors. Nothing in this Agreement shall be construed to create a relationship of employment or agency, nor shall either party's employees, servants, agents, or representatives be considered the employees, servants, agents, or representatives of the other. Nothing in this Agreement shall be construed to constitute the parties as partners or joint venturers, or allow either of the parties to create or assume any obligation on behalf of the other party.

11. RECORDS AND REPORTS

INSTITUTION shall furnish COMPANY with copies of Study Results documents upon request, provide information regarding Study progress and allow COMPANY access to Study Results upon request, at mutually agreeable times during normal business hours. All Private Healthcare Information shall be deleted from any Study data provided to COMPANY. Upon completion of the research or termination of the Agreement, INSTITUTION will submit a written study report. This report will be due sixty (60) days after termination of this Agreement. INSTITUTION shall maintain all Study Results for as long as required by applicable laws and regulations.

12. MATERIALS

The COMPANY will provide the PRINCIPAL INVESTIGATOR with sufficient quantities of the COMPANY's drug / device/ INSERT at no charge for use in the Study. PRINCIPAL INVESTIGATOR shall return to COMPANY any remaining supply of the Drug / Device/ INSERT after completion or termination of the Study. INSTITUTION shall conduct the Study in accordance with any written instructions provided by COMPANY in regards to use of Drug *I* Device. I f COMPANY provides INSTITUTION with any proprietary study drugs and/or devices for use under the Study, such COMPANY proprietary materials will be used solely for the Study and not for any other purposes. INSTITUTION and PRINCIPAL INVESTIGATOR shall be responsible for compliance with all laws and regulations applicable to any destruction or disposition of COMPANY proprietary materials used under the Study. INSTITUTION and PRINCIPAL INVESTIGATOR will inform all potential Study participants that the proprietary study drugs and/or devices are being used for investigational purposes. Prior to using any proprietary study drugs and/or devices of COMPANY, PRINCIPAL INVESTIGATOR shall read and understand all information in the investigator's brochure, including the potential risks and side effects of the drug. Upon completion or termination of this Study, INSTITUTION shall return, at COMPANY's expense, or destroy any remaining COMPANY proprietary materials at the direction and request of COMPANY.

13. GOVERNING LAW

This agreement shall be interpreted and enforced under the laws of the State of New York, without giving effect to any conflicts-of-laws principles to the contrary. The Parties hereby submit to the exclusive jurisdiction of and venue in any state or federal courts located in the city of New York with respect to any and all disputes concerning or otherwise arising under this Agreement.

14. CHANGES

This Agreement and any Exhibits hereto constitutes the entire understanding of COMPANY and INSTITUTION with regard to the subject matter hereof. No changes, amendments or alterations shall be effective unless in writing and signed by both parties.

15. COMPLIANCE WITH HIPAA

INSTITUTION agrees to comply with all applicable state and federal laws and regulations, including the Health Insurance Portability and Accountability Act of 1996, as codified at 42 U.S.C. § 1320d ("HIPAA") and any current and future regulations promulgated thereunder. Both parties agree that the use of data generated under this Study shall be governed by the terms and conditions of the Informed Consent and HIPAA authorization fom1s, which have been or will be approved by INSTITUTION's IRB. Terms and conditions of this Agreement shall not supersede or modify the use of data terms and conditions listed in the Informed Consent and HIPAA authorization forms. PRINCIPAL INVESTIGATOR will ensure that the requirements relating to and obtaining Informed Consent and IRB review and approval are met. Any use or disclosure of Private Healthcare Information by COMPANY shall be subject to the applicable consent form and authorization documents.

16. USE OF NAME

Neither party shall use any other party's name in advertising, promotions, or other commercial materials without the prior express written consent of the party to be named. Company reserves the right, upon the review and consent of the Institution and Principle Investigator to report the existence of this Agreement in a press release, such consent shall not be unreasonably denied In particular, Company reserves the right to publish " topline" results of this study in a press release, subject to review and consent of the Institution and Principle Investigator, such consent shall not be unreasonably denied.

17. CONFLICT OF INTEREST

In order to avoid the potential for conflicts of interest as well as the appearance of such, PRINCIPAL INVESTIGATOR agrees that during the term of this Study he/she will not hold any shares of stock of COMPANY or options to purchase shares of stock of COMPANY without the prior written consent of COMPANY and notice to INSTITUTION of such, and that he/she will not purchase or sell, whether for his own account or the account of any other person or entity, shares of COMPANY stock. In addition, PRINCIPAL INVESTIGATOR will make all sub-investigators aware of this provision which shall be fully applicable to them.

18. FORCE MAJEURE

INSTITUTION shall not be liable for any failure to perform as required by this Agreement, to the extent such failure to perform is caused by any reason beyond control, or by reason of any of the following: labor disturbances or disputes of any kind, accidents, failure of any required governmental approval, civil disorders, acts of aggression, acts of God, energy or other conservation measures, failure of utilities, mechanical breakdowns, material shortages, disease, or similar occurrences.

19. ENTIRE AGREEMENT: AMENDMENTS

This Agreement and the Exhibits hereto contain the entire agreement between the parties with respect to the subject matter herein. No amendments or modifications to this Agreement shall be effective unless made in writing and signed by authorized representatives of both parties.

20. SEVERABILITY

In the event that a court of competent jurisdiction holds any provision of this Agreement to be invalid, such holding shall have no effect on the remaining provisions of this Agreement, and they shall continue in full force and effect.

21. DEBARMENT

INSTITUTION will not use in any capacity the services of any individual, corporation, partnership or association which:

(1) has been debarred under 21 U.S.C. 335a

(2) has been disqualified as a clinical investigator under the provision of 21 C.F.R. 312.70.

In the event that INSTITUTION becomes aware of the debarment or disqualification of any such individual, corporation, partnership or association providing services under this Agreement, INSTITUTION shall notify COMPANY.

22. SURVIVAL

The following shall survive termination of this Agreement: Sections 6, 7, 8, 9, I 0, 12, 13, 14, 15, 18, 19, 21 and 22.

23. PARTIES TO THIS AGREEMENT

Notwithstanding anything in this Agreement to the contrary, the PRINCIPAL INVESTIGATOR is not a party to this Agreement and INSTITUTION will be fully and solely responsible for all obligations of PRINCIPAL INVESTIGATOR hereunder.

The persons executing this Agreement represent and warrant that they have the full power and authority to enter into this agreement on behalf of the persons or entities they are signing on behalf of.

(Signature page follows)

INSTITUTION

BY: /s/ Rosaria McEntee

Name: Rosaria McEntee

Title: Director of Finance

Date: 8/3/2020

Read and Acknowledged by:

Steven Coca, M.D.

/s/ Steven Coca

Principal Investigator

Date: 8/3/2020

COMPANY

BY: /s/ Dr. Allen Davidoff

Name: Dr. Allen Davidoff

Title: C.E.O., XORTX Therapeutics

Date: Aug 3, 2020

APPENDIX A:

Characterization of COVID-19 progression and Markers of Acute Kidney Injury **XORTX Therapeutics Inc.**

COVID-19 shares similar symptoms and progression to other viral infections that can lead to acute kidney injury-such as SARS, MERS and influenza. Recent unpublished discussions with physicians at Mount Sinai NY and University of Colorado who are actively treating patients with COVID-19 report that many individuals have very high uric acid levels. Purine xanthine oxidase inhibitors (like Oxypurinol) have been used in the past for treatment of acute kidney injury such as tumor lysis syndrome, suppressing uric acid production and oxygen radical mediated injury. The source of increased uric acid levels is poorly characterized at present, although often associated with pulmonary infection injury (influenza), decreased VO2, cytokine storm, vascular injury, kidney injury. Regardless of the source of increased circulating uric acid levels, acute kidney injury is a reliably reproducible result when uric acid concentrations exceed 7 mg/dL and xanthine oxidase inhibition is an established method of protecting kidney health.

High circulating uric acid is frequently associated with acute kidney injury, with creatinine concentration in the serum acting as a marker of acute kidney injury. Proteinuria is also associated with high uric acid and decrease uric acid via xanthine oxidase inhibition is associated with decreasing proteinuria in the setting of chronic injury.

XORTX is seeking information gathered from COVID-19 patients to understand whether Uric Acid predict outcomes in individuals with COVID-19 infection.

Aim 1: To examine the independent association of serum uric acid and other clinical predictors for major adverse kidney events and death (MAKE-D) in patients hospitalized with COVID-19.

Sample size: 5000+ admitted with COVID-19 to the Mount Sinai Health System

Table. 1. Baseline Characteristics of Patients Admitted to MSHS with COVID-19 through May 20, 2020			
	All (n=5737)	**AKI (n= 3112)**	**No AKI (n= 2625)**
Age, median (IQR)	65 (54-77)	69 (59-79)	60 (46-72)
Female, n (%)	2506 (42.3)	1218 (39)	1288(49)
Race/Ethnicity, n (%)			
White	1372 (24)	738 (24)	634 (24)
Black	1602 (28)	938 (30)	664 (25)
Hispanic	1706 (30)	862 (28)	844 (32)
Asian	275 (5)	158 (5)	117 (5)
Other or unknown	782 (14)	416(13)	366 (14)
Comorbidities, n (%)			
Hypertension	1914 (33)	1297 (42)	617 (24)
Congestive Heart Failure	388(7)	294 (9)	94 (4)
Diabetes Mellitus	1266 (22)	895 (29)	371 (14)
Asthma	271 (5)	131 (5)	120 (5)
COPD	228 (4)	155 (5)	73 (3)
Pre-existing CKD	646 (11)	559 (18)	87 (3)
Liver Disease	126 (2)	87 (3)	39 (2)

baseline > 24 hours after admission

Inclusion Criteria (all of the following):
-Adults (aged 2:18 years)
-Hospitalized with confirmed diagnosis of COVID-19
-Admission > 24 hours
-At least one serum uric acid and one serum creatinine value beyond

Exclusion Criteria
-Stage 5 CKD or ESRD
-Transfer from outside hospital (not at the start of disease course of severe illness and lack of baseline/prior uric acid and serum creatinine values)
-fewer than 2 serum creatinine measurements available in hospital

Outcomes and Definitions:
Acute Kidney Injury (AKI) and AKI Stages will be defined using KDIGO creatinine criteria. Baseline serum creatinine will be defined as the last available creatinine measurement between 7 and 365 days before admission. All in hospital serum creatinine measurements will be used to determine AKI.

MAKE-D (Make Adverse Kidney Events) will be defined as the acute need for dialysis or a 50% increase in serum creatinine OR death.

Data Analysis:
For Aim 1, we will describe event rates of AKI, severe AKI, dialysis, complications from AKI and death in the hospitalized COVID patients. Overall rates will be reported as well as stratified by important confounders such as age, race and baseline kidney function (CKD stage prior to admission). We will employ multivariable cox proportional hazard models with time varying covariates to assess the risk for in-hospital death by AKI and to assess the independent clinical predictors of MAKE in hospitalized COVID patients. The primary independent variable to be assessed will be serum uric acid at baseline. Baseline covariates will include demographics, baseline kidney function (serum creatinine), severity of illness scores, vital signs, measures of hypoxemia, other key laboratory values such as CPK, medications including ACEi/ARB, BMI, and comorbidities. Time zero will be the date of hospital admission. Patients will be censored at the time of discharge.

The analyses will be repeated using a repeated measures Cox proportional hazards models take into account serial measures of serum uric acid as the independent variable. Other key covariates (potassium, pH, phosphate, blood pressure) will also be included as repeated measures covariates. In addition, we will use mediation analysis will be used to investigate the strength of the evidence that the association between uric acid and the clinical outcomes was a causal effect severe hyperuricemia. Cox proportional hazards regression models for death will be fitted with the baseline risk factors and baseline risk factors plus uric acid. The proportion of effect explained by hyperuricemia will be calculated on the change to the baseline risk factor coefficient after adding uric acid to the cox regression model and the variance derived using the delta method (SAS MEDIATE macro). Mediation analysis will be completed separately for each baseline risk factor of interest.

Aim 2: To assess the trajectory of longitudinal changes in serum uric acid, serum potassium, phosphate in patients with and without AKI.
Hypothesis: Time-updated fluctuations in serum uric acid will associate with clinical outcomes. Comparisons will be made by mixed-model repeated measures analysis of covariance with a subject random effect to account for the fact that multiple measurements within a participant over time are not independent.

We will test models with different numbers of trajectory groups and different forms of potential trajectories (linear, quadratic, or cubic) for the best model fit, assessed with the Bayesian Information C1iterion. We will compare the slopes of the biomarker trajectory groups using the "TRAJTEST" macro.

After we derive the trajectory groups, we will compare their risks of the kidney outcome using weighted Cox models. We will use a multivariable modeling strategy to adjust for potential confounding, including time updated covariates (including serum potassium, phosphate, pH, CPK).

We will attempt to identify a threshold of serum uric acid at various points in time in hospitalization that associate with high-risk for MAKE-D.

APPENDIX B:

Exhibit 10.2

THIS EMPLOYMENT AGREEMENT is made as of the 1st day of January, 2018.

BETWEEN:

XORTX Pharma Corp., a company continued under the laws of Canada (hereinafter called the "**CORPORATION**")

-and-

Allen Davidoff, an individual residing in the City of Calgary, in the Province of Alberta (hereinafter called the "**EMPLOYEE**")

WHEREAS the CORPORATION is principally engaged in the business of biotechnology research and development, and in particular developing drugs and therapeutics and accumulating and protecting intellectual property in respect of the foregoing;

AND WHEREAS the CORPORATION is desirous of employing the EMPLOYEE on the terms, conditions and for the considerations as hereinafter set forth and the EMPLOYEE wishes to accept such employment with the CORPORATION;

AND WHEREAS the parties desire to enter into this Agreement to set forth their respective rights and obligations;

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the premises, the mutual covenants and agreements herein contained and other good and valuable consideration, the parties hereto mutually covenant and agree as follows:

ARTICLE 1- CONTRACT FOR SERVICES

1.1 Subject to the earlier termination of this Agreement as hereinafter provided, the CORPORATION hereby agrees employ the EMPLOYEE as President and Chief Executive Officer in accordance with the terms and provisions hereof.

1.2 The EMPLOYEE shall be responsible for and shall have such authority as is consistent with the position of President and Chief Executive Officer of the CORPORATION all subject to the power, direction and control of the Board of Directors of the CORPORATION.

1.3 Notwithstanding Section 1.2 hereof, the EMPLOYEE'S services hereunder shall be provided on the basis of the following terms and conditions:

(a) The EMPLOYEE'S title shall be President and Chief Executive Officer of the CORPORATION;

(b) the EMPLOYEE shall faithfully, honestly and diligently serve the CORPORATION and cooperate with the CORPORATION and utilize maximum professional skill and care to ensure that all services rendered hereunder are to the satisfaction of the CORPORATION, acting reasonably, and to provide any other services not specifically mentioned herein, but which by reason of his capability he knows or ought to know to be necessary to ensure that the best interests of the CORPORATION are maintained;

(c) the EMPLOYEE shall assume, obey, implement and execute such duties, directions, responsibilities, procedures, policies and lawful orders as may be determined or given by the Board of Directors of the CORPORATION from time to time and report results of same as may from time to time be determined by the Board of Directors of the CORPORATION,

(d) the EMPLOYEE will, when it is deemed by the CORPORATION to be beneficial, join in or participate with organizations, clubs, associations or groups that may provide good business contacts and learning facilities for the benefit of the CORPORATION; and

(e) the EMPLOYEE shall have the authority to make the usual contracts necessary to carry on the business of the CORPORATION in the ordinary course.

1.4 The EMPLOYEE agrees to devote the whole of his time, attention and best efforts to further the business and interests of the CORPORATION during the period of this Agreement to the exclusion of all other employment. Except in the case where the EMPLOYEE is permitted to be a director and specifically a director of My Path Metabolix Inc.

1.5 It is acknowledged and agreed between the parties hereto that the services to be provided by the EMPLOYEE hereunder are of such nature that regular business may be impossible and that the EMPLOYEE may be required to perform services in excess of eight (8) hours per day or five (5) days per week. It is also anticipated that there will be certain evenings, weekends and holidays during which the EMPLOYEE may be required to provide services. The EMPLOYEE therefore agrees that the consideration herein set forth shall be in full and complete consideration herein set forth shall be in full and complete satisfaction for his work and services to be provided hereunder, no matter when and how performed and the EMPLOYEE releases the CORPORATION from any additional pay or compensation, whatsoever which he might have by reason of any existing or future legislation or otherwise.

1.6 The services to be carried out and performed by the EMPLOYEE shall be carried out and performed in the City of Calgary in the Province of Alberta, or such other places as may be mutually agreed between the EMPLOYEE and the CORPORATION. It is understood that a reasonable amount of business travel outside of Calgary may be required.

ARTICLE 2 -TERM OF CONTRACT

2.1 Subject to earlier termination pursuant to the terms hereof, this contract for services shall be for an indefinite term from and including the date hereof,

ARTICLE 3 - COMPENSATION

3.1 In consideration of the services to be provided by the EMPLOYEE to the CORPORATION pursuant to Article 1 hereof, the CORPORATION shall pay to the EMPLOYEE payable twice per month in equal instalments on the 15th and the last day of each month during the term hereof

3.2 The EMPLOYEE shall be reimbursed for all reasonable expenses incurred by him in or about the execution of his services hereunder, including living expenses while absent from his city of residence, travel and meeting/entertainment expenses. A11 such expenses shall be verified by statements, receipts or other reasonable evidence satisfactory to the CORPORATION.

3.3 In accordance with the terms and conditions of the applicable benefit plan texts, as amended by the Board of Directors from time the EMPLOYEE shall be entitled to participate in all executive, medical, dental, and other health care, life insurance, group accident, long term disability, savings, profit sharing, share option, share purchase and any other benefit plans of whatsoever nature which the CORPORATION may provide from time to time. The EMPLOYEE understands and agrees that the CORPORATION monitors such plans and benefits and may, from time to time, modify or terminate the plans and benefits.

3.4 The CORPORATION will provide the EMPLOYEE with a parking stall convenient to his location of work.

ARTICLE 4- REVIEW OF COMPENSATION

4.1 The remuneration payable pursuant to Section 3.1 hereof shall be reviewed by the Board of Directors of the CORPORATION on or before the anniversary date hereof, and annually thereafter, at which time the Board of Directors shall consider such matters, as it may consider relevant and shall determine, in its absolute discretion, whether to increase the annual remuneration payable by the CORPORATION to the EMPLOYEE hereunder, provided always however, that the remuneration payable to the EMPLOYEE pursuant to Article 3 hereof sha1l not, as a result of such review, be reduced.

ARTICLE 5 - INCAPACITY

5.1 The EMPLOYEE shall be entitled to reasonable time from his services, without loss of compensation, due to sickness or illness or other incapacity.

5.2 In the event the EMPLOYEE is insured either personally or through the CORPORATION or through a group plan provided by the CORPORATION for loss of income as a result of disability and the EMPLOYEE receives compensation or disability income pursuant thereto, then the amount of remuneration which the EMPLOYEE is otherwise entitled to receive hereunder during the period of illness or incapacity shall be reduced by the amount of compensation or disability income paid by such insurer to the EMPLOYEE and the EMPLOYEE covenants and agrees that he shall immediately advise the CORPORATION from time to time of the receipt of any such disability income paid by such insurer to the EMPLOYEE.

ARTICLE 6 - CONFIDENTIAL INFORMATION

6.1 The EMPLOYEE covenants and agrees that during the term hereof and for a period of five (5) years thereafter, he will keep in strict confidence and shall not use, directly or indirectly, for any other purpose other than for the purpose of providing services hereunder, all knowledge, information (whether oral or written) and materials obtained or acquired during the course of his providing services hereunder relating to the CORPORATION or its business and affairs. Other than information disclosed or divulged to the Board of Directors and duly authorized officers and employees of the CORPORATION, the EMPLOYEE will not disclose, divulge, publish or transfer, or authorize or permit anyone else to disclose, divulge, publish or transfer or use to his own advantage any such knowledge, materials, business data or other information obtained pursuant to this Agreement or which relate in any manner to the business affairs of the CORPORATION, without the prior written consent of the CORPORATION, which consent may be arbitrarily or unreasonably withheld.

6.2 The obligation of the EMPLOYEE, as identified in Section 6.1, hereof shall not apply to such knowledge, information, material or business data obtained pursuant to this Agreement or relating in any manner to the business affairs of the CORPORATION which:

(a) was demonstrably unknown to the EMPLOYEE prior to receipt thereof pursuant to this Agreement;

(b) is available to the public in the form of written publication;

(c) shall have become available to the EMPLOYEE in good faith from a third party who has a bona fide right to disclose same; and

(d) that information which is required to be disclosed to any federal, provincial, state or local government or governmental branch, board, agency car instrumentality necessary to comply with relevant timely disclosure laws or regulatory authorities, including stock exchanges having jurisdiction in respect of securities of the CORPORATION.

ARTICLE 7 - VACATION

7.1 During the term hereof, the EMPLOYEE shall be entitled vacation in each calendar year hereof. The EMPLOYEE understands and agrees that vacation is to be taken at a time mutually agreed upon between the EMPLOYEE and the CORPORATION.

ARTICLE 8 – NON-ASSIGNABILITY

8.1 This contract for services and all other rights, benefits, and privileges herein conferred are personal to the EMPLOYEE and accordingly may not be assigned by the EMPLOYEE.

ARTICLE 9 -TERMINATION

9.1 Notwithstanding the term of this Agreement as set forth in Section 2.1 hereof, this Agreement shall be terminated upon the occurrence of any one of the following events:

(a) the death of the EMPLOYEE;

(b) the EMPLOYEE becoming bankrupt or making an assignment for the benefit of creditors in general;

(c) thirty (30) days written notice by the EMPLOYEE of his intention to terminate this Agreement;

(d) thirty (30) days written notice by the CORPORATION of its intention to terminate this Agreement and in conjunction with Section 9.3 below;

(e) incapacity due to illness or injury to the EMPLOYEE, such that in the opinion of an independent medical expert acceptable to the EMPLOYEE (or his legal personal representative) and the CORPORATION, which will keep the EMPLOYEE from his duties for a period longer than six (6) consecutive months;

(f) at any time by the CORPORATION, without notice, for "**Just Cause**"("**Just Cause**" will include just cause for dismissal at common law in addition to the conviction of the EMPLOYEE for a indictable criminal offense or the breach by the EMPLOYEE of any of the material covenants or terms of this Agreement).

9.2 In the event this Agreement is terminated in accordance with the provisions of subsections 9.1(a), (b), (c), (e) and (f) hereto the EMPLOYEE shall not be entitled to additional remuneration hereunder from and after the "**Termination Date**" ("**Termination Date**" means the last day the EMPLOYEE is actively performing his duties at work, regardless of the reason for termination.)

9.3 If the CORPORATION terminates this Agreement in accordance with 9.1(d) hereof, the parties agree that the CORPORATION shall pay to the EMPLOYEE an amount of severance calculated in accordance with the following, and that such amount shall constitute full and final settlement of any amounts owing to the EMPLOYEE as a result of such termination:

It is further understood that the EMPLOYEE will sign a Release and Confidentiality Agreement similar to that attached as Schedule "A" prior to receiving any amounts owing which exceed the minimum entitlements in accordance with the *Employment Standards Code* (Alberta), as amended, and the EMPLOYEE will provide all required resignations of any positions he holds in the CORPORATION.

ARTICLE 10 - NON COMPETITION & NON-SOLICITATION

10.1 The EMPLOYEE covenants and agrees with the CORPORATION that during the term hereof and for a period of two (2) years thereafter, he will not, either individually or in partnership or jointly or in conjunction with any person, association or syndicate, as principal, agent, shareholder, director, officer, employee or in any other manner whatsoever carry on or be engaged in or be concerned with or interested in or advise, lend money to, guarantee the debts or obligations of or permit his name or any part thereof to be used or employed by any person or persons, including, without limitation, any individual, firm, association, syndication, company, corporation, or other business enterprise, engaged in or concerned with or interested in any business or any part thereof presently carried on by the CORPORATION with respect to its business of any other business at any time during the term hereof carried on by the CORPORATION, except with written consent of the CORPORATION, which consent will not be reasonably withheld.

10.2 During the period identified in Section 10.1, the EMPLOYEE shall not solicit, engage in, assist or have an interest in or be connected with any person, firm or corporation soliciting any customer known or ought to be known to the EMPLOYEE to be a customer or business associate of the CORPORATION.

10.3 During the period identified in Section 10.1, the EMPLOYEE shall not induce, entice or attempt to obtain the withdrawal from the CORPORATION of any employee, consultant, contract researcher or management personnel either before or after the termination of this Agreement.

10.4 If the CORPORATION ceases to carry on business for a continuous period of six (6) months or more, then the provisions of Article 6 and Article 10 hereof shall be null and void and shall cease to have any force and effect after the expiration of the aforesaid period of time.

10.5 The EMPLOYEE confirms that the obligations in Sections 10.1, 10.2 and 10.3 of this Agreement are reasonably necessary for the protection of the CORPORATION and its shareholders and, given the EMPLOYEE's knowledge and experience, will not prevent the EMPLOYEE from being gainfully employed if the EMPLOYEE's employment with the CORPORATION ends.

ARTICLE 11- CHANGE OF CONTROL

11.1 In the event that any third party (which third party has a market capitalization of greater than Cdn.$200,000,000 or has an average daily trading volume of greater than $250,000 (based on the 30 days preceding the date of merger or acquisition and excluding any unusual block trades)) acquires greater than fifty (50%) of the outstanding common shares of the CORPORATION and, within thirty (30) days of such acquisition, the EMPLOYEE'S employment with the CORPORATION is terminated by the CORPORATION or the EMPLOYEE, then the EMPLOYEE shall be entitled to (less any payments received by or owing to the EMPLOYEE pursuant to Section 9.3 hereof).

ARTICLE 12 – INDEMNITY

12.1 The CORPORATION shall indemnify and save harmless the EMPLOYEE from and against any personal liability which he incurs in the performance of his employment duties on behalf of the CORPORATION, with the exception of the following:

(a) any liability arising from the EMPLOYEE's gross negligence or fraud or other acts of willful misfeasance; and

(b) any liability which the CORPORATION is prohibited from assuming by law.

ARTICLE 13- NOTICES

13.1 All notices required or allowed to be given under this Agreement shall be made either personally or by mailing same by prepaid registered post, addressed as hereinafter set forth or to such other address as may be designated from time to time by such party in writing, and any notice mailed as aforesaid shall be deemed to have been received by the addresses thereof on the fifth business day following the day of mailing:

If to the CORPORATION**:**

XORTX Pharma Corp.
29 Aspen Park Meadows S.W.
Calgary, Alberta T3H 5Z7

If to the EMPLOYEE:

Any party may, from time to time, change its address for service hereunder on written notice to the other party. Any notice may be served by hand delivery or by mailing same by prepaid, registered post, in a properly addressed envelope, addressed to the party to whom the notice is to be given at its address for service hereunder.

ARTICLE 14 - SEVERABILITY

14.1 Each provision of this Agreement is declared to constitute a separate and distinct covenant and to be severable from all such other separate and distinct covenants. Without limiting and foregoing, each provision contained in Article 6 and Article 10 hereof, are declared to-constitute separate and distinct covenants in respect of each capacity and each activity specified in Articles 6 and 10, and to be severable from all other such separate and distinct covenants. If any of the capacities, activities or periods specified in Articles 6 and 10, are considered by a court of as being unreasonable, the parties hereto agree that the said court will have authority to limit such capacities, activities, periods or areas to such capacities, activities, periods of areas as the court deems proper in the circumstances.

14.2 If any covenant or provision herein is determined to be void or unenforceable in whole or in part, it will not be deemed to affect or impair the enforceability or validity of any other covenant or provision of the Agreement or any part thereof.

ARTICLE 15 - RELIEF

15.1 The parties to this Agreement recognize that a breach by the EMPLOYEE of any of the covenants herein contained would result in damages to the CORPORATION and the CORPORATION could not adequately be compensated for such damages by monetary award. Accordingly, the EMPLOYEE agrees that in the event of any such breach, in addition to all other remedies available to the CORPORATION at law or in equity, the CORPORATION will be entitled as a matter of right to apply to a court of competent equitable jurisdiction of such relief by way of restraining order, injunction, decree or otherwise, as may be appropriate to ensure compliance with the provisions of this Agreement.

ARTICLE 16 - WAIVER

16.1 The parties agree that all restrictions in this Agreement are necessary and fundamental to the protection of the CORPORATION and are reasonable and valid, and all defenses to the strict enforcement thereof by the CORPORATION are hereby waived by the EMPLOYEE.

ARTICLE 17 - GENERAL

17.1 The parties hereto agree that they have expressed herein their entire understanding and agreement concerning the subject matter of this Agreement and it is expressly agreed that no implied covenant, condition, term or reservation or prior representation or warranty shall be read into this Agreement relating to or the subject matter hereof or any matter or operation provided for herein.

17.2 The provisions of this Agreement will enure to the benefit of and be binding upon the heirs, executors, administrators and legal personal representatives of the EMPLOYEE and the successors and assigns of the CORPORATION, respectively.

17.3 Wherever the singular or masculine or neuter is used in this Agreement, the same shall be construed as meaning the plural or feminine or a body politic or corporate and vice versa where the context of the parties hereto so require.

17.4 Time is of the essence hereof.

17.5 This Agreement shall be construed and interpreted in accordance with the laws of the Province of Alberta and Canada and each of the parties hereto hereby irrevocably attorns to the jurisdiction of the Courts of such province.

IN WITNESS WHEREOF the parties acknowledge and agree that they have read and understand the terms of this Agreement, and that they have had an opportunity to seek independent legal advice prior to entering into this Agreement, and that they have executed this Agreement with full force and effect from the date first written above.

XORTX PHARMA CORP.

Per: /s/ Alan Moore
Alan Moore, Director

Per: /s/ Allen Davidoff
Allen Davidoff, President

Per: /s/ Bruce Rowlands
Bruce Rowlands, Director

SIGNED, SEALED AND DELIVERED in the presence of:

/s/ Jamie Davidoff
Witness as to the signature of
Allen Davidoff
Jamie Davidoff

/s/ Allen Davidoff
Allen Davidoff

Exhibit 10.3

MASTER SERVICES AGREEMENT

(For All CRO Services)

This Master Services Agreement (this " Agreement") is made as of the day of 2017, (the "Effective Date") by and between Cato Research Canada lnc., a Quebec corporation headquartered at 9900 Cavendish Boulevard, Suite 300, Saint-Laurent, Quebec, Canada H4M 2V2 ("CRC"), and XORTX Pharma Corp., a form of organization with offices located at 4000, 421 7th Avenue SW, Calgary, Albe1ta, Canada T2P 4K9 ("XORTX"). Each of CRC and XORTX may be referenced to herein separately as a "Party" and collectively as the "Parties." As used in this Agreement, "Affiliate(s)" means any corporation, firm, partnership, or other entity which controls, is controlled by or is under common control with a Party. For the purpose of this definition, "control" shall mean the power to direct, or cause the direction of: the management and policies of an entity through the ownership, directly or indirectly, of at least fifty percent (50%) of the voting share capital of such entity or any other comparable equity, by contract, or by ownership interest.

WHEREAS, XORTX is engaged in the evaluation, development, commercialization or marketing of biologics, pharmaceutical agents, medical devices and/or other life sciences technologies (collectively, "Products"); and

WHEREAS, CRC is a contract research and development organization providing a broad range of services for the evaluation, development, commercialization or marketing of new biologics, pharmaceutical agents, medical devices and/or other life sciences technologies; and

WHEREAS, XORTX wishes to retain CRC, and CRC wishes to be retained by XORTX, to assist XORTX with certain aspects of the evaluation, development, commercialization or marketing of such Products or otherwise to provide certain consulting services as specified by XORTX from time to time; and

NOW, THEREFORE, in consideration of the foregoing premises and the promises, benefits, rights, and obligations set forth below, the Parties agree as follows:

1. Work Orders for CRO Services.

1.1 CRC shall provide services to XORTX, as requested by XORTX from time to time in accordance with the terms of this Agreement (the "CRO Services"). Requested CRO Services may include any area of services customarily undertaken by CRC, including without limitation the areas of clinical trials, clinical monitoring, site management, medical monitoring and pharmacovigilance or safety services.

1.2 If XORTX wants CRC to perform CRO Services and CRC wishes to perform such Services, the Parties shall prepare a Work Order in a form acceptable to both Parties, which Work Order shall contain, at a minimum, the CRO Services to be performed and the compensation therefore. It may also include any other requirements or obligations agreed upon by the Parties and not set forth herein. If CRC submits a proposal and such proposal is executed by both Parties with the intent that it be performed as a Work Order then it shall be deemed a Work Order. Each Work Order shall be deemed a part of this Agreement and incorporated into it, but no Work Order shall be deemed part of another Work Order unless specifically so stated in the applicable Work Order.

1.3 CRC shall not be obligated to perform the CRO Services described in any proposal, draft work order or similar document until such time as the Work Order related to such CRO Services has been signed by both Parties.

1.4 If the terms of a Work Order conflict with those of this Agreement, then the terms of this Agreement shall control unless otherwise specifically stated in the Work Order. If either Party sends a purchase order, confirmation, or similar form, then the terms of this Agreement and not those in such additional document shall control; the Parties agree that any additional or different terms in such form, now or in the future, are void even if the form indicates that it shall control.

1.5 Unless a Work Order specifies to the contrary, CRC may subcontract some or all of its obligations under such Work Order to an Affiliate provided that such Affiliate is bound by confidentiality obligations at least as protective of XORTX's confidential information as those in this Agreement. CRC shall be equally responsible for the performance of such Affiliate as CRC would be if it performed such obligations itself.

1.6 If a Work Order is unclear, ambiguous, or permits different understandings of the CRO Services to be performed, the Parties shall use good faith efforts to resolve such ambiguity, it being understood that such resolution may result in an adjustment to the budgeted costs.

1.7 If the scope or definition of the CRO Services changes, including without limitation a change in the number of units of any CRO Services as specified in the budget for the applicable Work Order, and the additional cost of such additional CRO Services does not exceed ten percent (10%) of the budget for the CRO Services as set forth in the applicable Work Order, CRC will notify XORTX of the changes and, upon XORTX's written or email authorization, will commence performance of the additional CRO Services without a formal Work Order amendment. CRC will thereafter formalize the changes by providing to XORTX a formal amendment to the Work Order reflecting the authorized changes; XORTX shall timely sign such amendment, but shall nevertheless be obligated to pay for the additional CRO Services based on the previously-given authorization to proceed even if the Work Order amendment is never signed. The same process shall be followed with respect to changes requested in excess of ten percent (10%) of the applicable budget; provided however, CRC shall not be obligated to commence performance of the additional CRO Services without a prior written Work Order amendment signed by XORTX.

1 . 8 If any regulations to which the CRO Services are subject are modified, CRC is hereby authorized, without any action required on the part of XORTX, to immediately commence undertaking the CRO Services in compliance with the revised regulations without a formal amendment to the applicable Work Orders. To the extent that compliance with the revised regulations results in an increased cost of the CRO Services, CRC will thereafter formalize the changes by providing to XORTX a formal amendment to the Work Order reflecting the changes to the cost of the CRO Services reasonably and necessarily incurred as a result of the regulatory changes. XORTX shall timely sign such amendment t, but shall nevertheless be obligated to pay for necessary and reasonable additional CRO Services to address the regulatory changes, even if the Work Order amendment is never signed.

1.9 Unless specifically included in an applicable Work Order, CRC will not collect or report to XORTX any payments made which may be reportable under the Physicians Payment Sunshine Act. If collection and reporting obligations are specified in an applicable Work Order, CRC shall report the required information based no payments made by CRC, and CRC shall have no obligations with respect to any payments made by XORTX; XORTX shall aggregate its own information from all sources and make its report to the Centers for Medicare and Medicaid Services.

1.10 Subject to the terms of Section 1.7 or 1.8, a Work Order may only be amended in writing with the signature of both Parties.

2. Performance of CRO Services.

2.1 CRC shall use commercially reasonable efforts to perform the CRO Services in accordance with the specifications, instructions, and guidelines in each Work Order and this Agreement in all material respects. CRC shall use its own protocols in the performance of CRO Services unless specified to the contrary in the applicable Work Order.

2.2 All CRO Services performed by CRC shall be performed in conformity with all applicable international, federal, state and local laws and regulations, including without limitation, as applicable, current Good Laboratory Practices, Good Manufacturing Practices, Good Clinical Practices, TCH Guidelines, and all applicable FDA regulations.

3 . **XORTX Obligations.** XORTX shall undertake the following obligations with respect to the performance of this Agreement, in addition to any other obligations outlined herein or in the applicable Work Order.

3.1 XORTX shall use commercially reasonable efforts to deliver all information and materials reasonably required for CRC's performance of CRO Services in accordance with mutually agreed upon timelines.

3.2 XORTX shall immediately inform CRC of any safety concerns or serious adverse events related to a Product that is the subject of the CRO Services.

3.3 XORTX shall use commercially reasonable efforts to not take any actions or participate in any activities that are intended to, or can be reasonably expected to, disrupt or interfere with CRC's obligations under this Agreement.

3.4 CRC believes all data, information and analysis provided and all reports generated as Deliverables (as defined below) will be accurate and reliable, but XORTX is ultimately and solely responsible for its use of the Deliverables or other matter or information produced or provided under this Agreement.

4. Compensation.

4.1 XORTX shall pay CRC for the CRO Services as specified in the Work Order governing such CRO Services. If travel time is not included in the applicable unit price on the Work Order, then it shall be billed as out of scope work time, with the understanding that, to the extent practical, travel time shall be used to perform CRO Services for XORTX.

Unless otherwise specified in the applicable Work Order, XORTX shall reimburse CRC for out-of-pocket expenses reasonably incurred in performance of the CRO Services under this Agreement including, but not limited to, third-party fees and expenses, pass-through expenses, telephone, facsimile, messenger, postage and other communication costs, document copying and retrieval, on-site and off-site storage fees, computer research fees and filing fees, reasonable transportation, lodging, and meal expenses for travel to sites away from CRC's office, and travel between CRC offices (collectively, "Expenses") ; provided however, that advanced written approval is required from XORTX for any Expense

4..3 Invoices for CRO Services and Expenses shall be in Canadian dollars unless the Work Order related to such CRO Services or Expenses specifies a different currency shall be sent monthly, and shall itemize the CRO Services performed and Expenses incurred. In addition to paying the amount due with respect to CRO Services and Expenses, XORTX shall also make additional payments for any federal, state, county, local or governmental taxes, duties, excise taxes, now or hereafter applied including sales tax, value added tax, or any similar tax. No deduction shall be made from the amount due or paid as a result of any taxes or withholding that may occur by governments with respect to payments made to CRC from outside Canada or as a result of any taxes paid by XORTX. Except as specified in Section 4.4, payment shall be in the full amount specified on the invoice. Except as otherwise set forth below or in an applicable Work Order, any and all payments made hereunder are nonrefundable.

4.4 If XORTX disputes the amount due on any invoice, then XORTX must notify CRC of such dispute before the payment due date and pay such amount as is undisputed by the payment due date. Both Parties shall act in good faith to promptly resolve such dispute, and upon resolution of the dispute, any amount remaining due shall be paid within fifteen (15) days after the resolution.

4.5 If all or any undisputed portion of an invoice remains unpaid when due . For the avoidance of confusion, in calculating finance charges related to disputed invoices, an invoice (or portions thereof, as applicable) shall be deemed to have been due such that finance charges begin to accrue: (a) thirty (30) days after the date of the original invoice if the invoice is determined to have been correct; or (b) if the dispute relates to incomplete or incorrect work then fifteen (15) days after the date on which it is determined all obligations for payment of each disputed amount were met under the Work Order such that payment of such amount should have been made. XORTX shall reimburse CRC on demand for all reasonable out-of pocket costs and expenses CRC incurs in enforcing payment of an overdue invoice, including, without limitation, attorneys' fees and expenses. Payments received from XORTX by CRC on an overdue invoice shall be first applied to costs of collection, then to accrued interest, and then to the unpaid balance of the invoice. If XORTX has more than one overdue invoice, CRC may, in its discretion, allocate collection costs among the invoices and apply payments against the invoices.

4.6 Except as otherwise set forth herein, any and all payments made hereunder are nonrefundable.

5. Term and Termination.

5.1 The term of this Agreement shall be from the Effective Date and it shall of any term, a Party gives written notice to the other Party that it does not want to renew this Agreement; provided however, that if the term of a Work Order extends beyond the term of this Agreement, then this Agreement will continue in effect as to that Work Order (only) until the completion or termination of such Work Order and all wind-down CRO Services related to such Work Order.

5.2 Either Party may terminate a Work Order upon the other Party's material default under this Agreement with respect to such Work Order, provided that the terminating Party has given the defaulting Party not less than thirty (30) days' prior written notice of such default and the defaulting Party has not cured such default by the end of the notice period. Termination of a Work Order based on an uncured default does not give rise to the right to terminate any other Work Order or this Agreement.

5.3 Except with respect to Work Orders for clinical trials, either Party may terminate a Work Order at any time upon no less than sixty (60) days ' prior written notice to the other Party. With respect to Work Orders for clinical trials, only XORTX may terminate at any time upon no less than sixty (60) days' prior written notice to CRC.

5.4 Upon early termination of a Work Order, CRC shall invoice XORTX and XORTX shall pay CRC for all CRO Services rendered and Expenses incurred through the date of termination in accordance with Section 4 above. CRC's compensation under any Work Order being paid on a fixed-fee basis or on any payment schedule which is other than either time-and-materials or a unit-based budget, the Work Order shall be converted to a time-and-materials basis in accordance with CRC's current rates, and CRC shall be paid for all CRO Services performed and Expenses incurred through the date of termination.

If XORTX terminates a Work Order under Section 5.3 or CRC terminates a Work Order under Section 5.2, then, in addition to payments made under Section 5.4, CRC shall use its best efforts to mitigate any costs to XORTX and avoid incurring any non-cancelable obligations after its receipt of notice of termination.

5.6 Any termination fee paid pursuant to Section 5.5 shall provide XORTX with a "Termination Credit" in the amount paid. As used in the preceding sentence, "New Work Order" shall mean any Work Order (a) for which the CRO Services commence not later than twelve (12) months after termination of the Work Order with respect to which the credit was created; and (b) which is for new CRO Services which are both (i) unrelated to the terminated Work Order and (ii) are not out-of-scope amendments for any Work Order already in effect. If no New Work Order is executed such that the CRO Services commence not later than twelve (12) months after termination of the Work Order with respect to which the credit was created, the Termination Credit shall expire.

5.7 Upon early termination of a Work Order, CRC shall inform XORTX of the extent to which it expects work in progress to be completed as of the termination date and CRC shall (unless otherwise instructed by XORTX) take steps to wind-down work in progress in an orderly fashion. In addition to all other amounts payable to CRC, XORTX shall pay CRC for such wind-down CRO Services on a time-and materials basis at CRC ' s current rates for all reasonable and customary wind-down CRO Services performed and Expenses incurred by CRC. If XORTX instructs CRC not to complete such wind-down CRO Services, CRC shall, upon notification of the termination of the Work Order, promptly cease providing CRO Services and incurring costs to the extent practicable. In any such event, XORTX shall be deemed to have released CRC from all legal liability and to have covenanted not to sue CRC on any claims related to failure to perform and the failure to complete reasonable and customary wind-down CRO Services.

5.8 ln addition to termination of this Agreement under Sections 5.1-5.3, at any time CRO Services under all Work Orders have been completed or terminated such that there is no request for CRO Services pending, either Party may terminate this Agreement by giving written notice of termination to the other Party.

5.9 The remedies set forth in this Section 5 are not meant to limit any additional remedies available to a Party for breach of this Agreement by the other Party.

6. Suspension of CRO Services.

6.1 If **XORTX** should, for any reason, suspend the CRO Services to be provided under any Work Order for a period of thirty (30) days, then at the end of such thirty (30) day period CRC may invoice XORTX and XORTX shall pay for all CRO Services which have been performed through the date of suspension which have not been invoiced previously. For any Work Order being paid on a unit-based budget basis, payment shall be made for each partially completed unit on a time-and-materials basis related to the CRO Services undertaken for each such unit. For any Work Order being paid on a fixed-fee basis or on any payment schedule which is other than either time-and-materials or a unit-based budget, all CRO Services performed shall be converted to a time-and-materials basis in accordance with CRC's current rates and CRC shall be paid for all CRO Services performed and Expenses incurred through the date of suspension .

6.2 CRC may in its sole discretion suspend its performance of CRO Services if an undisputed invoice is sixty (60) days or more overdue, and CRC may refrain from resuming performance of CRO Services until all overdue undisputed invoices have been paid in full. If CRC should suspend the CRO Services pursuant to this Section 6.2, and in the further event that the suspension shall remain in place for a period of at least thirty (30) days, then at the end of such 30-day period, CRC may invoice XORTX and XORTX shall pay for all CRO Services which have been performed through the date of suspension which have not been invoiced previously in the same manner as set forth in Section 6. l .

6.3 Any CRO Services performed related to a Work Order, during a period when it is under suspension shall be invoiced on a time-and-materials basis at CRCS's then-current rates.

6.4 Upon suspension of CRO Services, CRC may reassign its personnel assigned to the suspended Work Order unless a retainer fee in an amount to be agreed upon by the Parties at such time is paid in advance of each month during which XORTX wishes to reserve the assigned personnel. Payment of such retainer will ensure CRC will not reassign the designated personnel such that they are unavailable to provide the CRO Services upon resumption of CRO Services.

6.5 If any suspension initiated continues for a period of ninety (90) days, then unless either a retainer is being paid pursuant to Section 6.4 or the Parties agree to the contrary, at the end of the 90-day period the Work Order shall be deemed terminated either by XORTX without cause or by CRC with cause, as applicable, such that the terms of Section 5.5 shall apply .

6.6 The resumption of CRO Services after any suspension shall be subject to any additional costs which may be incurred as a result of the Work Order having been suspended and then restarted, including without limitation the training of new personnel if the retainer has not been paid for personnel to remain with the project.

7. Confidential Information.

7.1 For purposes of this Section, the Party disclosing Confidential Information is known as "Disclosing Party" and the Party receiving information is known as "Receiving Party." As applied to CRC, each of these terms shall include CRC and any applicable Affiliates within the definition.

7.2 "Confidential Information" means: (i) all information furnished by the Disclosing Party to the Receiving Party in tangible, visible, electronic or verbal form or by observation or by any other means, including, but not limited to, business plans, protocols, processes, samples, formulae, chemical entities, compounds, mixtures, prospective and current products, clinical data and analyses, test results, toxicology and pharmacology information, study procedures and manuals, pharmacy dispensing instructions, case report forms and their content, statistical reports, project management and staffing, manufacturing processes, nonpublished patent applications, financial data, forecasts and projections, proprietary software and database structures, research, "know-how," technology under development, marketing information, agreements \\:ith or proprietary information of third parties, licensors and licensees and strategic partners, regardless of whether such disclosures are marked or otherwise designated as "Confidential"; and (ii) the terms and conditions of this Agreement, all proposals and requests for proposals (including those submitted to the Receiving Party prior to the date of this Agreement and marked as Confidential at the time of delivery), and the existence of the discussions between the Parties to which this Agreement pertains.

7.3 No information shall be within the above definition of Confidential Information if it:

(a) is generally known to the public at the time the Disclosing Party discloses it to any a) Receiving Party;

(b) becomes generally known to the public subsequent to the time of the Disclosing Party's disclosure to any Receiving Party without any fault or disclosure on the part of such Receiving Party;

(c) was known to any Receiving Party prior to the disclosure by the Disclosing Party, free of any obligation of confidence, as evidenced by such Receiving Party's written records;

(d) is independently developed by such Receiving Party without reference to or reliance on the Confidential information as evidenced by Receiving Party's written records;

(e) is, to such Receiving Party's knowledge, rightfully communicated to it free of any obligation of confidence by anyone who is not a Party to this Agreement; or

(f) is communicated by the Disclosing Party free of any obligation of confidence to anyone that is not a Party to this Agreement.

By way of example and not limitation, information is not generally known to the public ifit is not available without considerable research or if it can be primarily located in cached memories of materials otherwise deleted from internet sources. Notwithstanding the foregoing, specific Confidential Information shall not be deemed to be within any of the foregoing exclusions merely because it is within the scope of more general information within one or more of the exclusions. Further, any combination of Confidential Information (whether or not combined with non-confidential information) shall not be deemed to be within the above exceptions merely because one or more individual items of Confidential Information are within the above exceptions. In furtherance but not limitation of the preceding sentence, any combination of items of Confidential Information shall not be deemed to fall within the foregoing exclusions merely because any or all of the items are published or otherwise in the rightful possession of the Receiving Party unless the combination itself and the principle of its use are published or otherwise in the rightful possession of the Receiving Party.

7.4 Receiving Party shall neither use nor reproduce Disclosing Party's Confidential Information except as necessary for: (a) negotiations, discussions and consultations with the personnel or authorized representatives of Disclosing Party; or (b) for the purpose of performing its obligations under this Agreement. Upon completion of the obligations under this Agreement that use the Confidential Information, or upon termination of this Agreement, Receiving Party shall, when requested by Disclosing Party in writing, promptly return to Disclosing Party all of the Confidential Information provided by Disclosing Party, except that Receiving Party may retain one (1) copy for recordkeeping purposes and Receiving Party shall not be required to remove or destroy any Confidential Information contained on backup media as a result of systematic backups of Receiving Party's computer system, provided that Receiving Party shall not access such backup media for the purpose of recovering the Confidential Information.

7.5 Receiving Party shall not dis close, without the prior written consent of Disclosing Party, any of Disclosing Party's Confidential Information to any third party other than Receiving Party' s, and its Affiliate s', directors, officers, employees, agents and consultants, hospital or institution authorities, Institutional Review Board members, clinical investigators, and others who are involved in fulfilling Receiving Party's obligations under this Agreement and who, in each case, (a) need to know such information for the purposes of performing such obligations and (b) are bound by obligations of confidentiality and non-use at least as restrictive as those set forth herein. With respect to the obligation in 7.5(b) it shall be deemed met as to disclosures by CRC of XORTX' s confidential information if XORTX has in place a nondisclosure agreement with the third party related to XORTX's Confidential Information. Receiving Party shall take commercially reasonable steps to prevent the disclosure or use of any such Confidential Information by Receiving Party's, and its Affiliates, directors, officers, employees, agents or consultants except as provided in this Agreement.

7.6 Jf any Disclosing Party's Confidential Information is required to be disclosed by Receiving Party to any government or regulatory authority or court entitled by law to disclosure of the same, Receiving Party shall not, unless required by law, order, regulation or ruling, disclose Confidential Information until the Disclosing Party has first (a) received prompt written notice of such requirement to disclose and (b) had an adequate opportunity to obtain a protective order or other reliable assurance that confidential treatment will be accorded to the Confidential Information required to be disclosed. The Receiving Party shall, at the expense of the Disclosing Party, provide the Disclosing Party with any reasonable assistance requested, and shall not oppose reasonable actions by the Disclosing Patty to assure confidential treatment. If the Disclosing Party is unable to obtain such protective order or other appropriate remedy, the Receiving Party and its Representatives will furnish only that portion of the Confidential Information which it is legally required to furnish. Any disclosure of Confidential Information pursuant to this Section 7.6 shall not affect or lessen the Receiving Party's obligations hereunder.

7.7 For purposes of this Agreement, the Parties hereby acknowledge and agree that, subject to the exceptions set forth in Section 7.3, this Agreement shall be considered XORTX's Confidential Information; provided however, that either Party may disclose the terms of this Agreement to advisors, investors and others on a need-to-know basis under circumstances that reasonably ensure the confidentiality, nondisclosure and nonuse thereof.

7.8 Receiving Party's obligations under this Section 7 shall terminate with respect to any Confidential Information of Disclosing Party five (5) years after the date of disclosure.

8. **Protected Health Information.** The Parties recognize that the Act Respecting the Protection of Personal Information in the Private Sector requires CRC to protect the privacy and security of protected health information that may be acquired in the course of performing this Agreement. The Parties agree to comply with this statute and other applicable laws and governmental regulations governing protected confidential health infom1ation.

9. Ownership.

Upon the creation of each Deliverable, XORTX is granted a license to use the Deliverable for the purpose contemplated by the Parties at the time of its creation. Such license shall terminate upon the earliest of the following: (a) payment of all amounts invoiced for the Deliverable, at which time XORTX shall own all right, title, and interest in and to all data, information, improvements, discoveries, inventions, printed materials, and other work product contained therein which is specific to the Deliverable; or (b) the passage of three (3) months after delivery of the applicable invoice without payment and without any notification from XORTX that there is a dispute about the invoice; or (c) the passage of one (1) year after delivery of a disputed invoice with no resolution, provided however, if at such time the invoice is in the process of formal dispute resolution in mediation, court or arbitration, then thirty (30) days after the date on which the amount due is finally determined by the finder of fact or by settlement. To the extent not covered by the preceding sentence, and except as limited by Section 9.2, all copyrights, patents, trade secrets, or other intellectual property rights associated with any ide as, concepts, techniques, inventions, processes, or works of authorship included in the Deliverable shall be treated in the same manner as the Deliverable and as specified in the preceding sentence. At such time as XORTX owns the Deliverable and all intellectual property rights related thereto, CRC irrevocably assigns and transfers to XORTX any and all right, title, or interest CRC may have in such Deliverable. Upon request of XORTX and at XORTX's expense, CRC shall take such further actions, including execution and delivery of instruments of conveyance necessary to obtain legal protection in the United States and foreign countries for such Deliverable and for the purpose of vesting title thereto in XORTX. As used herein, "Deliverable" shall mean reports, information or other matters which are physically delivered (whether in hard copy or electronically) to XORTX in accordance with the terms of the Work Order. To the extent the Work Order requires CRC to undertake general consulting services pursuant to which CRC provides generic explanations or information, only such part of any deliverable which contains XORTX-specific analysis shall be deemed a Deliverable subject *to* the terms of this Section 9.l. Notwithstanding any other provision of this Agreement to the contrary, (x) with respect to Deliverables relating to an invoice for which only a portion of amount due is disputed, if the disputed and unpaid amount is the lesser of

9.2 Notwithstanding the foregoing Section 9.1, XORTX acknowledges that within the scope of the business practices of CRC and its Affiliates, they possess certain inventions, processes, know-how, trade secrets, improvements, other intellectual property and business assets, including fom1s, templates, analytical methods, protocols, procedures and techniques, computer technical expertise and software, independently developed or otherwise owned by CRC and its Affiliates and not specifically related to the Deliverables. In addition, during the course of performing or incidental to the CRO Services, CRC or its Affiliates may develop forms, templates, analytical methods, protocols, procedures and technique s, functions, computer code, database structures and other property that are not specific to the general functionality of the Deliverables, not specific to any Product unique to XORTX, and which does not in its generic form rely on or otherwise incorporate any Confidential information of XORTX (collectively, the "Cato Property").

XORTX and CRC agree that any Cato Property used, improved or modified by CRC or its Affiliates under or during the term of this Agreement shall be deemed Cato Property and owned solely by CRC or its Affiliates. If any Cato Property is incorporated into the Deliverables, then CRC hereby grants to XORTX a fully paid-up, non-exclusive, perpetual worldwide license to use such Cato Property (without representation or warranty and without right to sublicense or otherwise transfer without the prior written consent of CRC), to the extent necessary to use such Deliverables as was anticipated by the Parties.

9.3 CRC and its Affiliates shall be free to use and employ the general skills, know-how, and expertise of their employees, and to use, disclose, and employ any generalized ideas, concepts, know-how, methods, techniques, or skills gained or learned by their employees and consultants during the course of any assignment, so long as they acquire and apply such information without disclosure of any Confidential Information of XORTX and without any unauthorized use or disclosure of any Deliverable.

10. Representations and Warranties.

10.1 CRC represents and warrants that CRC has the experience, capability, personnel and resources necessary to perform CRO Services under this Agreement and each Work Order in a commercially reasonable manner.

10.2 XORTX represents and warrants that it has the ability to comply with and perform all financial obligations under this Agreement. XORTX further represents and warrants that it owns or otherwise has all necessary rights in and to the Product and all intellectual property rights therein (including without limitation the patent rights in all Products) so as to permit use of the Product and such intellectual property by CRC as contemplated in each Work Order; no third party has any right to prevent or to claim a payment is due from CRC as a result of its use of any Product or of the intellectual property rights therein as contemplated in any Work Order.

10.3 Each Party represents and warrants that (a) it has the corporate power and authority to enter into and perform its obligations under this Agreement and any Work Order; and (b) entering into and performing this Agreement and any Work Order will not conflict with or result in a violation of any of the terms or provisions, or constitute a default under any of its organizational documents, any mortgage, indenture, lease, contract or other agreement or instrument binding upon it or by which any of its properties are bound, or any permit, concession, franchise, license, judgment, order, decree, statute, law, ordinance, rule or regulation applicable to it or its properties.

10.4 Except as set forth in this Section 10, CRC makes no warranty, either express or implied, including without limitation the warranties of merchantability, fitness for a particular purpose, title and non infringement as to any matter, and further including but not limited to the CRO Services, results of CRO Services, any Deliverables or any other matter or information produced or provided under this Agreement. Without limiting the foregoing, CRC does not warrant, guarantee, or make any warranty regarding the use, or the results of the use, of the Deliverable, reports, analyses, documents, memoranda or any other matter or information produced or provided under this Agreement.

11. CRC Personnel.

11.1 CRC shall be responsible for all aspects of the labor relations of the personnel undertaking the CRO Services including, but not limited to, wages, benefits, discipline, hiring, firing, promotions, pay raises, overtime, and job assignments. XORTX shall have no power or authority in these areas. CRC shall ensure the payment of all contributions and taxes imposed by any federal or state governmental authority with respect to or measured by wages, salaries, or other compensation paid to persons employed to undertake the CRO Services.

11.2 XORTX understands that the performance of CRO Services requires special skills, training and experience. XORTX further understands that CRC and its Affiliates have expended considerable sums to train their personnel to perform the CRO Services requested by XORTX from time to time under this Agreement, and CRC will give XORTX access to experienced and highly skilled practitioners. When CRC or its Affiliates lose personnel, CRC or its applicable Affiliate incurs significant expenses in hiring and training his or her replacement. Accordingly, during the term of this Agreement and for a period of one (1) year after the termination or expiration of the last Work Order to terminate or expire under this Agreement, XORTX agrees that it will not without CRC's written permission and payment of a fee, hire as an employee or independent contractor any employee or independent contractor of CRC or its Affiliates who has participated in the performance of CRO Services under this Agreement until after the date on which such person has ceased to be employed or retained by CRC or its applicable Affiliate for a period of not less than twelve (12) months. Such fee shall be paid in cash no later than thirty (30) days after the date on which such employee begins employment or contractual work with XORTX. Each CRC Affiliate shall be a third-party beneficiary for the purposes of being able to enforce this Section 11.2.

12. Indemnification.

12.1 XORTX shall indemnify, defend and hold harmless each CRC Indemnified Party from and against all Losses resulting from, related to or (as appropriate) alleging any CRC Indemnified Conditions. The foregoing indemnification obligations of XORTX under this Section 12.1 shall not include any Losses incurred by CRC when, and to the extent that, such Losses result from or are related to (a) the negligence, intentional misconduct or intentional omission of the CRC Indemnified Party, (b) the breach of this Agreement by CRC, an Affiliate of CRC or any other person for whose actions CRC is liable under this Agreement or applicable law, or (c) the violation by CRC, its directors, officers, employees or agents of any applicable law, regulation or other government requirement where such violation was caused by the conduct of the relevant CRC Indemnified Party and where CRC is seeking indemnification due to such breach.

12.2 CRC shall indemnify, defend and hold harmless each XORTX Indemnified Party from and against all Losses resulting from, related to or (as appropriate) alleging any XORTX Indemnified Conditions .. The foregoing indemnification obligations of CRC under this Section 12.2 shall not include any losses incurred by XORTX when, and to the extent that, such Losses result or are related to (a) the negligence, intentional misconduct or intentional omission of the XORTX Indemnified Party; (b) the breach of this Agreement by XORTX, an affiliate of XORTX, or any other person for whose actions XORTX is liable under this Agreement or applicable law; or (c) the violation by XORTX, its directors, officers, employees or agents, of any applicable law, regulation or other governmental requirement. Notwithstanding the foregoing g, CRC shall not be liable for, and this Section 12.2 does not require CRC to provide indemnification with respect to, the actions or omissions of any third party which CRC hires (excluding Affiliates of CRC) at XORTX' s request to provide services hereunder.

12.3 If an Indemnified Party receives notice of any claims for which the Indemnified Party wishes to seek indemnity under this Agreement, then the Indemnified Party shall promptly provide prompt written notice of the claim no later than thirty (30) calendar days following its notice of the claim to the Party required to provide indemnification by Section 12.1 or 12.2. The failure of an Indemnified Party to promptly provide such notice will not relieve the indemnifying Party of any indemnification responsibility under this Section 12, except to the extent, if any, that such failure materially prejudices the ability of the Indemnifying Party to defend such claims. The indemnifying Party shall have the right to control the defense or settlement of the claims with counsel of its own choosing provided that such counsel is reasonably acceptable to the Indemnified Party and provided further that the Indemnified Party will be entitled, at the Indemnified Party's expense, to participate with its own counsel in such defense and settlement. The Indemnified Party shall at all times cooperate in the investigation and defense of such claims and promptly deliver to the indemnifying Party (or its counsel) such information related to the basis for the claims as the indemnifying Party (or its counsel) may reasonably request. If the indemnifying Party declines to assume defense of any claim, and it is later determined by a court of competent jurisdiction that such claim was eligible for indemnification under Section 12.1 or 12.2, as applicable, then within thirty (30) calendar days following such determination, the Indemnifying Party shall reimburse the Indemnified Party in full for all judgments, costs and expenses (including reasonable attorneys' fees) incurred in connection with such claim. The indemnifying Party shall not settle any claim without the prior written consent of the Indemnified Party if such settlement: (a) materially diminishes any of the Indemnified Party's rights under this Agreement and/or the Work Order or seeks to impose additional obligations on the Indemnified Party; or (b) arises out of or is a part of any criminal action, suit or proceeding or contains a stipulation or admission or acknowledgement of any liability or wrongdoing (whether in contract, tort or otherwise) on the part of the Indemnified Party.

12.4 Definitions. The following definitions apply in this Section 12:

(a) "CRC Indemnified Party" means CRC and its Affiliates and the directors, officers, employees, consultants and agents of CRC and/or its Affiliates.

(b) "XORTX Indemnified Party" means XORTX and its Affiliates and the directors, officers, employees, consultants and agents of XORTX and/or its Affiliates.

(c) "Indemnified Party" means either a CRC Indemnified Party or an XORTX

(d) "Losses" mean all liability, loss, costs, claim s, damages, expenses, judgments, awards, and settlements, including (without limitation) actual attorneys' fees and expenses, whether arising in tort or in contract, in law or in equity. arising from a claim brought by a third party, in response to any legal proceeding brought by a third party or occurring due to any contractual obligation to indemnify, defend and/or hold harmless any third party.

(e) "CRC indemnified Conditions" means:

(i) the CRO Services;
(ii) the use of Deliverable s;
(iii) any harm or bodily injury caused by any Product;
(iv) the infringement of or use of any intellectual property right or proprietary right in relation to XORTX's Products, programs, procedures, materials, data, or other information used by, or on behalf ot: or furnished by or on behalf of, XORTX in connection with this Agreement or the provision of CRO Services under this Agreement;
(v) the material breach of this Agreement by XORTX or by any other person for whose actions XORTX is liable under this Agreement or applicable law;
(vi) the negligence, intentional misconduct or intentional omission of XORTX or of any employee, contractor, agent or representative of XORTX; or
(vii) any request for deposition, documents or other information legally compelled including, without limitation, by subpoena or by agreement made in lieu of subpoena, in connection with XORTX's litigation, arbitration or other proceeding with any third party where CRC and/or any of its Affiliates are not also a party or in any investigation of XORTX by any governmental authority.

(f) "XORTX Indemnified Conditions" means:

(i) the negligence, intentional misconduct or intentional omission of CRC or any employee, contractor, agent or representative of CRC;
(ii) the material breach of this Agreement by CRC or any other person for whose actions CRC is liable under applicable law or this Agreement;
(iii) the violation by CRC, its directors, officers, employees or agents, of applicable law, regulation or other governmental requirement;

13. Insurance.

13.1 XORTX shall maintain in full force and effect customary insurance coverage for all XORTX Product s, clinical trials or other projects related to the CRO Services, including, without limitation, products liability, general liability, and related insurance coverage with policy limits in an amount XORTX's senior management reasonably determines to be sufficient to support Upon completing or otherwise terminating each clinical trial for which CRC provides CRO Services, XORTX shall purchase and maintain a tail policy to cover claims first made and/or reported after completion of such clinical trial.

13.2 XORTX's insurance policy(ies) covering any clinical trial shall name CRC and its respective officers, directors and employees as additional named insureds with a broad form additional insured endorsement (acceptable in form and content to CRC) and shall indicate that the policy will not be canceled or changed until thirty (30) days after written notice of such cancellation or change is delivered to CRC. At CRC's request, XORTX shall provide CRC with an additional insured certificate and a copy of the additional insured endorsement from XORTX's insurance carrier.

13.3 CRC shall maintain in full force and effect, at no cost to XORTX, customary insurance coverage for the CRO Services to be undertaken under each Work Order with policy limits in an amount CRC' s senior management reasonably determines to be commercially reasonable under the circumstances.

14. Limitation of Liability.

14.1 XORTX agrees that, regardless of the form of any claim, XORTX' s sole remedy and CRC's sole obligation with respect to any claims made related to or arising out of this Agreement shall be governed by this Section.

14.2 XORTX's remedies for defective performance by CRC under this Agreement shall be limited to, at CRC's option, either: (a) correction of the non-conforming CRO Services, or (b) reimbursements of payments (excluding payments for Expenses) made by XORTX to CRC for such non conforming CRO Services under the applicable Work Order during the six (6) month period immediately preceding the event for which the claim is made.

CRC's obligations for any reason other than as set forth in Section 14 .2

14.4 It is expressly agreed that in no event shall CRC, its Affiliates or anyone else who has been involved in the performance of this Agreement on behalf of CRC be liable for any indirect, consequential, incidental, special, punitive, or exemplary damages arising from any legal theo ry, even if such person had been apprised of the likelihood of such damages occurring. XORTX agrees that, notwithstanding the applicable statute of limitations, it may not bring any claim against CRC more than one (1) year after the cause of action arose.

15. Investigator and Other Third-Party Payments.

15.1 CRC shall, at XORTX ' s request in a Work Order, disburse payments to investigators, monitors, laboratories or other third parties contracted with XORTX to provide services with respect to a clinical study for which CRC is providing CRO Services to XORTX (each, a "Third-Party Contractor") . CRC will disburse all such payments (each, a "Third-Party Contractor Fee") in accordance with the provisions of the agreement between XORTX and the Third-Party Contractor (each, a "Third -Party Contractor Agreement"), a copy of which shall be provided to CRC prior to any payment being made. CRC will not unreasonably withhold any Third-Party Contractor Fee and will not impose additional restrictions on the terms of payment for the Third-Party Contractor Fee set forth in the Third-Party Contractor Agreement.

15.2 XORTX shall provide CRC with the funds to pay each Third-Party Contractor Fee, plus any related administrative fee, prior to the date on which CRC is scheduled to disburse such Third-Party Contractor Fee. To the extent payments to any Third-Party Contractors are to be made in a currency other than Canadian dollars, then contrary to the terms of Section 4.3 to make payment in Canadian dollars, funds for each such payment shall be made by XORTX in the currency in which the Third-Party Contractor Fee is to be paid. If XORTX does not provide the funds to CRC, then CRC will not disburse such Third-Party Contractor Fee until it receives the funds, including any administrative fee, from XORTX. In such event, XORTX shall be deemed to have released CRC from all legal liability, and to have covenanted to indemnify and not to sue CRC on any claims related to failure to disburse or otherwise pay the Third-Party Contractor Fee. XORTX agrees that CRC shall not have any liability to XORTX with respect to payments made to any Third-Party Contractor in accordance with the terms of the applicable Third-Party Contractor Agreement, even if XORTX would prefer such payment not be made unless XORTX shall have notified CRC prior to the time the payment is due not to make the payment. If XORTX notifies CRC not to make any payment, XORTX agrees to indemnify CRC with respect to any claims made against it by the Third Party Contractor related to failure to disburse or otherwise pay the Third-Party Contractor Fee withheld in accordance with XORTX's instructions.

15.3 If XORTX provides CRC with funds in excess of the total Third-Party Contractor Fees disbursed by CRC (plus any administrative fee for Third-Party Contractor Fees actually paid), then CRC shall prepare and send a reconciliation of such funds to XORTX within ninety (90) days after the early termination or expiration of the Work Order under which such Fees were being disbursed. Any excess funds shall first be applied to undisputed amounts otherwise due to CRC here under, and then any remainder shall be refunded to XORTX.

16. Transfer of Responsibilities and Obligations.

16.1 If XORTX, pursuant to a Work Order, requests that CRC enter into agreements with investigators, monitors, laboratories, storage facilities, clinical material manufacturers or shippers, or other third parties to provide services with respect to a clinical study for which CRC is providing CRO Services to XORTX (each a "Third-Party Agreement"), then subject to CRC undertaking its obligations under each Third-Party Agreement (except as with respect to payment which is governed by Section 16.2), XORTX will assume all obligations and liabilities under such Third-Party Agreement, including but not limited to all regulatory and legal obligations, and indemnify CRC for any claims made against CRC for any liability incurred by it as a result of the execution and delivery by CRC of such Third-Party Agreement (s). Notwithstanding the foregoing, the Parties shall establish a process for review of Third-Party Agreements before execution, which process shall generally include an agreement on the base form, information provided by XORTX on parameters for changes, and consultation with XORTX on significant issues outside the parameters. If a Work Order terminates (for any reason) before completion of the CRO Services specified therein and pursuant to that Work Order, CRC has entered into any Third-Patty Agreements, CRC shall be free to terminate such Third-Party Agreements and XORTX shall pay all termination fees or other liabilities owed by CRC or its Affiliates due to such termination.

16.2 XORTX shall provide CRC with the funds to pay each Third-Party Agreement (the "Third- Party Fees"), plus any administrative fee, before the date on which CRC is scheduled to disburse each such Third-Party Fee. To the extent payments to Third Parties are to be made in a cmTency other than Canadian dollars, then contrary to the terms of Section 4.3, funds for each such payment shall be made by XORTX in the currency in which the Third-Party Fee is to be paid. If XORTX does not provide the funds to CRC before the scheduled payment date, then CRC will not disburse such Third-Party Fee until it receives the funds (including any administrative fee) from XORTX. CRC shall have no liability to XORTX with respect to payments made to any Third Party in accordance with the terms of a Third-Party Agreement, even if XORTX would prefer such payment not be made unless XORTX instructs CRC not to make the payment before CRC does so. If XORTX fails to provide the required funds on a timely basis or notifies CRC to withhold or otherwise not pay any Third-Party Fees required to be paid under an applicable Third-Party Agreement, then XORTX agrees to indemnify CRC with respect to any claims made against CRC by the Third Party for failure to make (or delay in making) the payment of the Third-Party Fees (including, but not limited to, charges for interest and late payment fees). If XORTX provides CRC with funds in excess of the total Third-Party Fees disbursed by CRC (plus the administrative fee), then CRC shall prepare and send a reconciliation of such funds to XORTX within ninety (90) days after the early termination or expiration of the Work Order under which such Third-Party Fees were being disbursed. Any excess Third-Party Fees shall first be applied to undisputed amounts otherwise due to CRC hereunder, and then any remainder shall be refunded to XORTX.

16.3 Transfer of sponsor obligations with respect to any clinical trial may only be made pursuant to a Work Order, a signed Transfer of Sponsor Obligation form, and otherwise in accordance with 21 CFR 312.52 and other applicable laws and regulations.

17. Audits, Inspections and Site Visits.

17. I XORTX and/or XORTX's representative may, during normal business hours and upon no less than two (2) weeks ' prior notice, meet with CRC or its applicable Affiliate(s) and their respective employees, consultants, and/or subcontractors engaged in the performance of CRO Services at CRC or at the location(s) of the facilities used to undertake the CRO Services to: (i) examine and inspect the facilities used for the performance of CRO Services, (ii) observe the progress of activities relating to the CRO Services; (iii) inspect and copy or have copied records, documents, information, data, and materials specifically relating to the CRO Services, and (iv) inspect and copy or have copied financial reports and other documents accounting for the fees, costs and expenses of the CRO Services.

17.2 CRC will, during regular business hours and on no less than two (2) weeks' notice, permit a regulatory auditor to have access to CRC's records pertaining to the CRO Services provided pursuant to this Agreement for the purpose of auditing and verifying such CRO Services.

17.3 CRC will, during regular business hours and on no less than two (2) weeks ' notice, permit a financial auditor to have access to CRC' s records pertaining to the CRO Services provided pursuant to this Agreement for the purpose of auditing and verifying the billing for such CRO Services.

17.4 At XORTX 's reasonable request, CRC shall cooperate with any regulatory authorities and allow them to review and copy applicable records and data related to the CRO Services. If a request is made directly to CRC (or its applicable Affiliate(s)) by any regulatory authority to review records and data, or to contact, visit, or inspect CRC's (or its applicable Affiliate's or investigator ' s) records and data, relating to any CRO Services or CRC's (or its applicable Affiliate's or investigator ' s) performance of CRO Services, then CRC shall notify XORTX as soon as practicable (unless prohibited by law) after such regulatory authority issues or gives to CRC (or any such of its applicable Affiliate(s) or investigator) any notice of intent to inspect, notice of inspection, notice of inspectional observations, warning letter, or other written communication concerning any CRO Services, and CRC shall provide XORTX a copy thereof. To the extent permitted by law, prior to any submission to a regulatory authority of any response that may be required as a result of the inspection or visit, CRC (its applicable Affiliate(s) or investigator) shall provide XORTX with the opportunity to review and comment on the proposed response.

17.5 All persons sent by XORTX to undertake such visits, inspections or audits pursuant to Sections 17.1-17.3 shall be qualified by education, training, and experience, and shall be reasonably acceptable to CRC. The number, extent and frequency of such visits, inspections or audits shall be reasonable under the circumstances and normally shall not exceed one in every twelve (12) month rolling period. Unless such person is an employee of XORTX, he or she shall report to XORTX only those facts and conclusions determined as a result of the visit which are directly related to XORTX ' s interests. All information obtained from an audit shall be Confidential Information except as otherwise set forth in Section 7.3, above. Unless the visits, inspections and/or audits set forth in Sections 17.1-17.4 are specifically included in a Work Order, XORTX shall, in addition to any other payment obligations under this Agreement, pay CRC, on a time-and-materials basis, at its current rates for the CRC or Affiliate personnel assigned to supervise or otherwise participate in or assist administratively with such audit, inspection or visit, including without limitation for any CRC or Affiliate personnel required to participate in it or meet with the regulatory inspectors.

18. Force Majeure; Other Delays.

18.1 If either Party is delayed in, hindered in, or prevented from the performance of any act required under this Agreement by reason of strike, lockout, labor problems, restrictions of government, judicial orders or decrees, riots, insurrection, terrorism, war, acts of God, inclement weather, or other causes that are beyond the reasonable control of such Party, then performance of such act shall be excused until the cause is remedied. The delayed Party shall use commercially reasonable efforts to resume performance as soon as possible. Notwithstanding the foregoing, this Section 18.1 shall not apply to or excuse any failure to make payments when due.

18.2 CRC will not be liable to XORTX nor be deemed to have breached this Agreement for errors, delays or other consequences arising from the failure of XORTX or any third party not under CRC's direct control to provide documents, materials or information in a timely manner or otherwise cooperate in order for CRC to perform its obligations, and any such failure by XORTX or any third party not under CRC's direct control shall automatically extend any timelines affected by such failure by at least the period of the delay (and such longer period as it may take as a result of the need to suspend and then wind up again), unless XORTX agrees in writing to pay any additional costs that would be required to meet the original timeline.

19. **Independent Contractor.** CRC shall perform CRO Services as an independent contractor. Neither Party has authority to make any statement, representation, or commitment of any kind nor *to* take any action binding on the other Party without the other Party's prior written consent.

20. **Use of XORTX's Name**. XORTX agrees that CRC may use XORTX's name as a reference for prospective clients or in literature relating to CRC's capabilities, provided that such use does not violate Section 7 above.

21. **Notification.** Any notices given hereunder shall be in writing and shall be deemed to have been given on the earlier of personal receipt by an authorized representative of the Party, or receipt at the Party's notice address. Notice may be given by the following means: registered mail/return receipt requested, overnight courier, or personal delivery. All notices shall be sent to a Party at its address set forth on the signature page of this Agreement, or to such other address as is given by notice to the other Party. Notices are deemed given on receipt or attempted delivery (if receipt is refused).

22. **Waiver ..** No waiver of any right or remedy with respect to any occurrence or event shall be valid unless it is in writing and executed by the waiving Party. No such valid waiver shall be deemed a waiver of such right or remedy with respect to such occurrence or event on a continuing basis or in the future unless the waiver states that it is intended to apply continuously or to future events. A waiver shall not excuse use a subsequent breach of the same term, unless the waiver so states.

23. **Severability.** If any provisions of this Agreement are determined to be invalid or un-enforceable, those provisions shall be reformed to the extent necessary to comply with law and the Parties' intent, or struck if necessary, and the validity and effect of the other provisions of this Agreement shall not be affected.

24. Contract Interpretation and Dispute Resolution.

24.1 The official language of this Agreement and any interpretation of it is English. All contract interpretations, notices and dispute resolutions shall be in English. Any attachments or amendments to this Agreement shall be in English. Translation of any of these documents shall not be construed as official or original versions of the documents.

This Agreement has been prepared following arm's-length negotiations in which each Party had the opportunity to consult with legal counsel regarding the provisions hereof. Every covenant, term and provision of this Agreement shall be construed according to its fair meaning and not strictly for or against any Party or Parties.

24.2 This Agreement shall be governed by, construed and interpreted in accordance with the laws of the laws of Canada and of the Province of Quebec, excluding the United Nations Convention on Contracts for the International Sale of Goods, and no conflict-of-laws provision shall be invoked to permit application of the laws of any other province, country or jurisdiction.

24.3 Any controversy, claim or dispute arising out of, in connection with or relating to this Agreement shall be first submitted to mediation, which mediation shall take place in Montreal, Quebec, unless another location shall be agreed upon by the Parties. In the event mediation is not successful, then the dispute shall be resolved in binding arbitration in accordance with the terms of Exhibit A.

24.4 Notwithstanding Section 24.4, (a) with respect to any uncollected invoice, if CRC shall have inquired as to whether there is a dispute as to whether payment is due as a result of issues in performance of the CRO Services and received no response or a response that there is no dispute, then CRC may bring a collection suit in a court resident in the Montreal Urban Community, and XORTX consents to the jurisdiction of such courts in such matter; and (b) if damages for a breach are not likely to be an adequate remedy, then either Party may commence injunction proceedings before a court of equity sitting in the Montreal Urban Community, and the Parties hereby consent to the jurisdiction of such court. Any arbitration award shall be homologated such that it can be put into compulsory execution in accordance with Articles 946 and following of the Quebec Code of Civil Procedure.

25. **Survival.** The representations and warranties of the Parties in Section 10 shall survive the events to which they relate and survive the expiration or earlier termination of this Agreement and the rights and obligations of the Parties set forth in Sections 3.2, 4, 5, 7 - 17, 20, 24 and 25 shall survive expiration or earlier termination of this Agreement.

26. **Assignment.** This Agreement may not be assigned by either Party without the prior written consent of the other Party, which shall not be unreasonably withheld; provided however, that either Party may assign this Agreement in connection with a merger or the sale of all or substantially all of the assigning Party' s assets or equity on the condition that such assignment shall be solely to the acquirer or purchaser of the assigning Party and such acquirer or purchaser must assume the assigning Party's obligations under this Agreement.

27. **Freedom to Contract.** Except with respect to CRO Services for which XORTX specifically hires CRC to perform under this Agreement, (a) XORTX is not required to use CRC for any specific work; (b) XORTX is free to retain others to perform the same or similar CRO Services as offered by CRC; (c) CRC is not required to provide any CRO Services to XORTX; and (d) CRC is free to provide CRO Services to other clients that are similar to CRO Services provided to XORTX.

28. **Entire Agreement.** Exhibit A to this Agreement and Work Orders are incorporated into and made a part of this Agreement. This Agreement, including the incorporated Exhibit A and Work Orders, constitutes the entire agreement between the Parties relating to the subject matter hereof and supersedes all prior agreement s, whether written or oral, relating to the subject matter hereof; provided however, that all prior confidentiality, nonuse and nondisclosure agreements shall remain in effect as to all matters not specifically covered by this Agreement. Except as otherwise authorized herein, changes, modifications, and amendments shall be valid only if made in writing and signed by both Parties. To be effective, any agreement between the Parties purporting to amend a term of this Agreement, including without limitation any Work Order, must specifically identify that term ' s Section number and state the Parties' specific intent to amend that term.

29. **Signatures.** This Agreement and any amendment or Work Order issued under it may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument. Facsimile signatures and signatures transmitted by email after having been scanned shall be accepted as originals for the purposes of this Agreement and any Work Orders issued hereund er.

The Parties have executed this Agreement as of the date first written above.

Cato Research Canada Inc.		**XORTX Pharma Corp.**	
By:	/s/ Dan Cato **The signer certifies that he/she has the authority to execute this Master Services Agreement on behalf of Cato Research Canada Inc.**	By:	/s/ Allen Davidoff **The signer certifies that he/she has the authority to execute this Master Services Agreement on behalf of XDRTX Pharma Corp.**
Name:	Dan Cato	Name:	Allen Davidoff
Title:	Assistant Secretary	Title:	President & CEO

EXHIBIT A
ARBITRATION PROCEDURES

The following rules shall apply to any arbitration of the parties under Section 24:

1 . **Location and Language.** The location of the arbitration shall be in Canada unless the Parties should agree to a different location. The arbitration shall be conducted in American English and any findings and/or decisions shall be rendered in American English.

2 . **Number and Selection of Arbitrator.** The arbitration shall be conducted by one arbitrator who is independent and disinterested with respect to the Parties, this Agreement, and the outcome of the arbitration (a "neut ral arbitrator"). If the Parties cannot agree on a neutral arbitrator, then each Party shall select an arbitrator it believes to be neutral, who together shall select a third neutral arbitrator to conduct the arbitration. The arbitrator will be selected with consideration given to his or her experience with disputes of the type being submitted (e.g., the nature of the claim and the technology involved). It is the intent of the Parties that the final arbitrator be selected within thi11y (30) days after the arbitration demand is first made.

3 . **Case Management.** Prompt resolution of any dispute is important to both Parties and the Parties agree that the arbitration of any dispute shall be conducted expeditiously. The arbitrator is instructed and directed to assume case management initiative and control over the arbitration process (including scheduling of events, pre-hearing discovery and activities, and the conduct of the hearing), in order to complete the arbitration as expeditiously as is reasonably practical to obtain a just resolution of the dispute.

4 . **Remedies.** The arbitrator shall follow and apply the applicable law. The arbitrator shall grant such legal or equitable remedies and relief in compliance with applicable law that the arbitrator deems just and equitable, but only to the extent that such remedies or relief could be granted by a state or federal court and as otherwise limited by the terms in this Agreement. No punitive damages may be awarded by the arbitrator. The arbitrator may not award punitive damages and no court action may be maintained seeking punitive damages.

5. **Expenses.** The expenses of the arbitration, including the arbitrator's fees, expert witness fees, and attorney's fees, may be awarded to the prevailing Party, in the discretion of the arbitrator, or may be apportioned between the Parties in any manner deemed appropriate by the arbitrator. Unless and until the arbitrator decides that one Party is to pay for all (or a share) of such expenses, both Parties shall share equally in the payment of the arbitrator's fees as and when billed by the arbitrator.

6 . **Confidentiality.** The Parties shall keep confidential the fact of the arbitration, the dispute being arbitrated, and the decision of the arbitrator. Notwithstanding the foregoing, (a) the Parties may disclose information about the arbitration to persons who have a need to know, such as directors, trustees, management employees, witnesses, experts, investors, attorneys, lenders, insurers, and others who may be directly affected; (b) if a Party has stock that is publicly traded, the Party may make such disclosures as are required by applicable securities laws or listing rules; and (c) if a Party is expressly asked by a Third Party about the dispute or the arbitration, the Party may disclose and acknowledge in general and limited terms that there is a dispute with the other Party which is being (or has been) arbitrated.

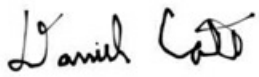
Signature Certificate

Document Reference: N5WWBHI4TKW8SKUYTVKG4Z

RightSignature
Easy Online Document Signing

Dan
Party ID: ZSIEVKI89LA3LFHUBDBHF8
IP Address: 4.14.94.140
VERIFIED EMAIL: dcato@cato.com

Electronic Signature:



Multi-Factor Digital Fingerprint Checksum: dfcf6338e9fe6eb1dc221775fc4a13ada1ecd04b

Timestamp	Audit
2017-08-11 11:44:09 -0700	**All parties have signed document. Signed copies sent to: Joette, Dan, and Marisa.**
2017-08-11 11:44:08 -0700	**Document signed by Dan (dcato@cato.com) with drawn signature. - 4.14.94.140**
2017-08-11 11:42:35 -0700	**Document viewed by Dan (dcato@cato.com). - 4.14.94.140**
2017-08-11 11:41:22 -0700	**Document created by Marisa (mdesai@cato.com). - 4.14.94.140**

This signature page provides a record of the online activity executing this contract.

Exhibit 10.4

February 1 2021

STRICTLY CONFIDENTIAL

Dr. Allen W. Davidoff, Ph.D.
President and Chief Executive Officer
XORTX Therapeutics, Inc.

Re: Advisory Agreement

Dear Dr. Davidoff:

This letter (this "Agreement") constitutes the agreement between XORTX Therapeutics, Inc. (the "Company") and David Sans, Ph.D. ("Consultant"), that Consultant shall serve as the exclusive advisor for the purpose of establishing collaborations or clinical trials to study the effect of XORTX's products, the Company's small molecules (the "Product"), in patients across various clinical indications (the "Services".)

A. Fees. In consideration for the Services, the Company shall pay to Consultant:

B. Expenses. In addition to any fees payable to Consultant hereunder, the Company hereby agrees to reimburse Consultant for all documented reasonable travel and other out-of-pocket expenses incurred in connection with Consultant's engagement hereunder, subject to pre-approval by the Company for individual expenses over $250 USD. Invoices. Payment shall be made to the Consultant with respect to the services and expenses referred to in Sections 2.01 and 2.02 above within 14 days from receipt by the Corporation of proper invoices and vouchers together with a satisfactory progress report in respect of such services and expenses, all of which shall be submitted by the Consultant to the Corporation on the 15th and last day of each month during the term of this Agreement.

C. Term and Termination of Engagement. The term of this Agreement (the "Term") will begin on the date hereof and continue for a duration of twelve months immediately following the date hereof and may be extended by the parties hereto by mutual written agreement. The parties shall have the right to terminate this Agreement for any reason with 30 -day notice. Notwithstanding anything to the contrary contained herein, the provisions concerning confidentiality, indemnification, contribution and the Company's obligations to pay fees, grant options and reimburse expenses contained herein will survive any expiration or termination of this Agreement.

i) This agreement shall be terminated upon the death of the consultant and all pending payments shall be made to a surviving spouse or the deceased's estate

ii) Provisions which Operate Following Termination - Notwithstanding any termination of this Agreement for any reason whatsoever and with or without cause, the provisions of and any other provisions of this Agreement necessary to give efficacy thereto shall continue in full force and effect following any such termination.

D. Insurance The Consultant shall pay for and maintain for the benefit of the Consultant and the Corporation, with insurers or through the appropriate government department and in an amount and in a form acceptable to the Corporation, appropriate insurance concerning the operations and liabilities of the Consultant relevant to this Agreement including, without limiting the generality of the foregoing, workers' compensation and unemployment insurance in conformity with applicable statutory requirements in respect of any remuneration payable by the Consultant to any employees of the Consultant and public liability and property damage insurance.

E. Use of Information. The Company will furnish Consultant such written information as Consultant reasonably requests in connection with the performance of its Services hereunder. The Company understands, acknowledges and agrees that, in performing its Services hereunder, Consultant will use and rely entirely upon such information as well as publicly available information regarding the Company and other potential parties to a Collaboration and that Consultant does not assume responsibility for independent verification of the accuracy or completeness of any information, whether publicly available or otherwise furnished to it, concerning the Company or otherwise relevant to a Collaboration, including, without limitation, any financial information, forecasts or projections considered by Consultant in connection with the provision of its services.

F. Inventions and Patents In the event In the event the Consultant contributes to any patentable invention as a result of his consultative services to the Corporation hereunder, any such patentable invention shall be the exclusive property of the Corporation and the Corporation shall have the exclusive right to file patent applications in the name of the Corporation in connection therewith and the Consultant shall co-operate with the Corporation and provide all necessary assistance in the filing and prosecution of such patent applications.

G. Confidentiality

i. The Consultant shall not (either during the term of this Agreement or at any time thereafter) disclose any information relating to the private or confidential affairs of the Corporation or relating to any secrets of the Corporation to any person other than for the Corporation's purposes and, without limiting the generality of the foregoing, the Consultant shall not (either during the term of this Agreement or at any time thereafter) disclose information covered by the confidentiality agreement entered into by the consultant and XORTX Therapeutics, to any person other than for the Corporation's purposes and shall not (either during the term of this Agreement or at any time thereafter) use for his own purposes or for any purposes other than those of the Corporation any such information or secrets he may acquire in relation to the business of XORTX Therapeutics. (collectively referred to as "**Confidential Information**").

ii. For greater clarity, Confidential Information does not include general knowledge you acquire during the term of this Agreement that is not proprietary to the Corporation, provided that such general knowledge is a product of the Consultant's memory and unaided by data, documents, agreements, files or other materials of the Corporation in any form.

iii. The Consultant shall obtain a written non-disclosure agreement in a form acceptable to the Corporation in respect of the same information and secrets referred to in Section 3.07(1) from all persons, including but not limited to any employees of the Consultant, who are in any way involved with the Consultant in the provision of consultative services to the Corporation hereunder and in the course thereof may have access to any information or secrets referred to in Section 3.07(1) and the Consultant shall provide the Corporation with executed copies of any such non-disclosure agreement.

H. Indemnity.

i. In connection with the Company's engagement of Consultant hereunder, the Company hereby agrees to indemnify and hold harmless Consultant from and against any and all claims, actions, suits, proceedings (including those of shareholders), damages, liabilities and expenses incurred by him (including the reasonable fees and expenses of counsel), (collectively a "Claim"), which (A) result from (i) any actions taken or omitted to be taken (including any untrue statements made or any statements omitted to be made) by the Company, or (ii) any actions taken or omitted to be taken by Consultant in connection with the Company's engagement of Consultant hereunder , or (B) otherwise result from Consultant's activities on the Company's behalf under Consultant's engagement hereunder, and the Company shall advance to Consultant all reasonable and documented expenses (including the reasonable fees and expenses of counsel) incurred by Consultant in connection with investigating, preparing or defending any such claim, action, suit or proceeding, whether or not in connection with pending or threatened litigation in which Consultant is a party. The Company will not, however, be responsible for any Claim, which is finally determined (whether judicially or pursuant to binding arbitration) to have resulted from the gross negligence or willful misconduct of any person seeking indemnification for such Claim.

ii. The Company further agrees that it will not, without the prior written consent of Consultant, settle, compromise or consent to the entry of any judgment in any pending or threatened Claim in respect of which indemnification may be sought hereunder (whether or not Consultant is an actual or potential party to such Claim), unless such settlement, compromise or consent includes an unconditional, irrevocable release of Consultant from any and all liability arising out of such Claim.

iii. Promptly upon receipt by Consultant of notice of any complaint or the assertion or institution of any Claim with respect to which indemnification is being sought hereunder, Consultant shall notify the Company in writing of such complaint or of such assertion or institution but failure to so notify the Company shall not relieve the Company from any obligation it may have hereunder, except and only to the extent such failure prejudices the Company. If the Company so elects or is requested by Consultant, the Company will assume the defense of such Claim, including the employment of counsel reasonably satisfactory to Consultant and the payment of the fees and expenses of such counsel. In the event, however, that legal counsel to Consultant reasonably determines that having common counsel would present such counsel with a conflict of interest or if the defendant in, or target of, any such Claim, includes Consultant and the Company, and legal counsel to Consultant reasonably concludes that there may be legal defenses available to Consultant that are different from or in addition to those available to the Company, then Consultant may employ its own separate counsel to represent or defend him in any such Claim, and the Company shall pay the reasonable fees and expenses of such counsel. Notwithstanding anything herein to the contrary, if the Company fails timely or diligently to defend, contest, or otherwise protect against any Claim, Consultant shall have the right, but not the obligation, to defend, contest, compromise, settle, assert crossclaims, or counterclaims or otherwise protect against the same, and shall be fully indemnified by the Company therefor, in accordance with the terms hereof, including without limitation, for the reasonable fees and expenses of its counsel and all amounts paid as a result of such Claim or the compromise or settlement thereof. In addition, with respect to any Claim in which the Company assumes the defense, Consultant shall have the right to participate in such Claim and to retain his own counsel therefor at his own expense.

iv. The Company agrees that if any indemnity sought by Consultant hereunder is held by a court to be unavailable for any reason then the Company and Consultant shall contribute to the Claim for which such indemnity is held unavailable in such proportion as is appropriate to reflect the relative benefits to the Company, on the one hand, and Consultant on the other, in connection with Consultant's engagement referred to above.

v. The Company's indemnity, reimbursement and contribution obligations under this Agreement (a) shall be in addition to, and shall in no way limit or otherwise adversely affect any rights that Consultant may have at law or at equity and (b) shall be effective whether or not the Company is at fault in any way.

I. Limitation of Engagement to the Company. The Company acknowledges that Consultant has been retained only by the Company, that Consultant is providing services hereunder as an independent contractor (and not in any fiduciary or agency capacity) and that the Company's engagement of Consultant is not deemed to be on behalf of, and is not intended to confer rights upon, any shareholder, owner or partner of the Company or any other person not a party hereto as against Consultant or any of his affiliates, or any of his or their respective officers, directors, controlling persons (within the meaning of Section 15 of the Act or Section 20 of the Securities Exchange Act of 1934), employees or agents. Unless otherwise expressly agreed in writing by Consultant, no one other than the Company is authorized to rely upon this Agreement or any other statements or conduct of Consultant, and no one other than the parties hereto is intended to be a beneficiary of this Agreement. The Company acknowledges that any recommendation or advice, written or oral, given by Consultant to the Company in connection with Consultant's engagement is intended solely for the benefit and use of the Company's management and directors in considering a possible Collaboration, and any such recommendation or advice is not on behalf of, and shall not confer any rights or remedies upon, any other person or be used or relied upon for any other purpose. Consultant shall not have the authority to make any commitment binding on the Company, and no partnership or joint venture is formed or intended by this Agreement.

i. The Consultant is not an employee of the Corporation and shall not be entitled to receive from the Corporation any employee related benefits, either under the Ontario *Employment Standards Act, 2000,* as amended from time to time, or otherwise. The Corporation shall not be required to make contributions to unemployment insurance, Canada Pension Plan, workers' compensation and other similar levies in respect of the fee for services to be paid to the Consultant.

ii. Consultant shall not contract on behalf of the Corporation - The Consultant shall not, without the prior written consent of the Corporation, enter into any contract or commitment in the name of or on behalf of the Corporation or bind the Corporation in any respect whatsoever.

iii. This agreement supersedes all prior agreements between The Company and Consultant.

J. Limitation of Consultant's Liability to the Company. Consultant and the Company further agree that neither Consultant (within the meaning of Section 15 of the Act or Section 20 of the Exchange Act of 1934), shall have any liability to the Company, its security holders or creditors, or any person asserting claims on behalf of or in the right of the Company (whether direct or indirect, in contract, tort, for an act of negligence or otherwise) for any losses, fees, damages, liabilities, costs, expenses or equitable relief arising out of or relating to this Agreement or the Services rendered hereunder, except for losses, fees, damages, liabilities, costs or expenses that arise out of or are based on any action of or failure to act by Consultant other than those that were finally judicially determined to have resulted solely from the gross negligence or willful misconduct of Consultant.

K. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York applicable to agreements made and to be fully performed therein. Any dispute, controversy, or claim arising out of or relating to this Agreement, or a breach thereof, shall be determined by final, binding arbitration administered by the International Center for Dispute Resolution of the American Arbitration Association ("ICDR") in accordance with its International Arbitration Rules ("ICDR Rules"). Upon request of any party hereto, the ICDR shall apply its International Expedited Procedures. The arbitration shall be conducted by a single arbitrator ("Arbitrator") selected pursuant to the ICDR Rules. The place of arbitration shall be New York, New York. The language of the arbitration shall be English. The ICDR and/or the Arbitrator shall be expressly empowered to enter Emergency Measures of Protection pursuant to Article 6 of the ICDR Rules and Interim Measures pursuant to Article 24 of the ICDR Rules. The ICDR and/or the Arbitrator shall not condition such measures on provision of security by the requesting party. The fact of the arbitration, all documents or information created, discovered, or shared in connection with the arbitration, and the arbitration award or other documents generated by the ICDR or the Arbitrator shall be confidential information subject to the terms of the Confidentiality Agreement. The parties hereto irrevocably and unconditionally consent to submit to the exclusive jurisdiction of the courts of the state of New York and of the United States District Courts located in the Borough of Manhattan, New York City, New York, for any lawsuits, actions or other proceedings to confirm or enforce the arbitration award and agree not to commence any such lawsuit, action or other proceeding (including any lawsuit, action or other proceeding seeking to challenge or vacate such an award) except in such courts. To the extent any party hereto initiates such an action, lawsuit, or proceeding, the parties hereto agree to take all steps necessary and appropriate to cause all records of the proceedings of such action, lawsuit, or proceeding to be sealed to the fullest extent allowable under the law. The parties hereto hereby irrevocably and unconditionally waive any objection to the laying of venue of any lawsuit, action or other proceeding arising out of or relating to this Agreement in the courts of the state of New York or the United States District Courts located in the Borough of Manhattan, New York City, New York, and hereby further irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such lawsuit, action or other proceeding brought in any such court has been brought in an inconvenient forum. ANY RIGHT TO TRIAL BY JURY WITH RESPECT TO ANY LAWSUIT, CLAIM OR OTHER PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT IS EXPRESSLY AND IRREVOCABLY WAIVED.

L. Notices. All notices hereunder will be in writing and sent by certified mail, hand delivery, overnight delivery or email, if sent to Consultant, to the address set forth on the first page hereof, or email Notices sent by certified mail shall be deemed received five days thereafter, and notices sent by hand delivery or overnight delivery shall be deemed received on the date of the relevant written record of receipt. Notices sent by email shall be effective when sent, provided that such sent e-mail is kept on file (whether electronically or otherwise) by the sending party and the sending party does not receive an automatically generated message from the recipient's e-mail server that such e-mail could not be delivered to such recipient.

M. Miscellaneous. This Agreement shall not be modified or amended except in writing signed by Consultant and the Company. No provision of this Agreement may be waived except in a writing executed by the party against whom the waiver is to be effective. This Agreement may not be assigned by Consultant without the prior written consent of the Company. This Agreement shall be binding upon and inure to the benefit of each of Consultant and the Company and their respective successors and permitted assigns. This Agreement constitutes the entire agreement of Consultant and the Company with respect to the subject matter hereof and supersedes any prior or contemporaneous agreements (other than the Confidentiality Agreement). If any provision of this Agreement is determined to be invalid or unenforceable in any respect, such determination will not affect such provision in any other respect, and the remainder of the Agreement shall remain in full force and effect. This Agreement may be executed in counterparts (including facsimile counterparts or other electronic signatures, including by email attachment), each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

[signature page follows]

In acknowledgment that the foregoing correctly sets forth the understanding reached by Consultant and the Company, please sign in the space provided below with this Agreement shall become binding as of the date first set forth above.

Yours truly,

CONSULTANT

By: /s/ David Sans
Name: David Sans
Title: Consultant

Accepted and agreed to as of
the date first written above:
XORTX Therapeutics, Inc.

By: /s/ Allen Davidoff
Name: Allen Davidoff
Title: CEO, President

MASTER SERVICE AND TECHNOLOGY AGREEMENT

TIDS AGREEMENT is effective as of February 25, 2019 (this "Agreement").

PARTIES

(1) Prevail InfoWorks, Inc. is a corporation having its principal place of business at 211 North 13th Street, 6th Floor, Philadelphia, PA 19107-1610, USA ("Prevail"); and

(2) XORTX Therapeutics, Inc. is a corporation having its principal place of business at 4000, 421 - 7th Avenue SW, Calgary, Alberta T2P 4K9 ("Company").

(3) Prevail and Company may be individually referred to as a "Party" or collectively as the "Parties."

BACKGROUND

(A) Prevail provides clinical research services to life science companies and has developed certain software applications and platforms, which it makes available to customers via the Internet for a fee for the purpose of managing their clinical trials and analyzing the data from them.

(B) Company wishes to use Prevail's services in its business operations.

(C) Prevail has agreed to provide and Company has agreed to use and pay for Prevail's service subject to the terms and conditions of this Agreement.

AGREED TERMS

1. DEFINITIONS

The definitions in this clause apply in this Agreement.

Company Data: the data generated in the clinical trial or trials referenced in an executed Schedule if applicable, as well as data imported or inputted by Company, Authorized Users, or Prevail or others on Company's behalf in connection the Services or facilitating Company's use of the Services.

Authorized Users: those officers, directors, employees, agents and independent contractors of Company who are Authorized by Company to use the Services and the Documentation, as further described in clause 3.

Business Day: any day which is not a Saturday, Sunday or public holiday in the USA or Canada.

Confidential Information: is defined in clause 10.

Debarment Act: the Generic Drug Enforcement Act of 1992, as amended, 21 U.S.C. §§ 306.

Documentation: the documents made available to Company by Prevail from time to time which sets out a description of the Services and the user instructions for the Services , including any executed Schedules.

Effective Date: the effective date of this Agreement as specified above.

Initial Subscription Term: the initial term of this Agreement is 48 months.

Normal Business Hours: 8:00 a.m. to 5:00 p.m. Eastern Time, USA, each Business Day.

Renewal Period: the period described in clause 12.1.

Services: the subscription services provided by Prevail to Company under this Agreement as set forth in Schedule 1 attached hereto and any other executed Schedules.

Software: the online software applications provided by Prevail as part of the Services.

Subscription Fees: the subscription fees payable by Company to Prevail for the Software and Services, as set forth in Schedule 1 attached hereto and any other executed Schedules.

Subscription Term: has the meaning given in clause 12.1.

User Subscriptions: the user subscriptions purchased by Company pursuant to clause 8 which entitle Authorized Users to access and use the Services and the Documentation in accordance with this Agreement.

2. SERVICES

During the Subscription Term, and from time to time , Company may purchase Services from Prevail that will be set forth in a Schedule agreed by and duly executed by both Parties, beginning with Schedule 1 attached hereto. Each executed Schedule shall be governed by this Agreement and include: (i) description of Services to be provided by Prevail , (ii) description of deliverables to be delivered by Prevail, and (iii) fee and payment schedule for the Services. Once executed by both Parties , each Schedule shall be deemed incorporated into this Agreement by reference. There will be no limit to the number of Schedules that may be added to this Agreement. In the event that the terms of an executed Schedule conflict with the terms of this Agreement, the terms of this Agreement shall govern unless the Schedule specifically references Section 2 of this Agreement and indicates such specific terms of the Schedule shall govern.

3. USER SUBSCRIPTIONS

Subject to terms and conditions set forth in this Agreement and Schedules duly signed by both Parties (including the attached Schedule 1), Prevail hereby grants to Company a non-exclusive, non-transferable right to permit Authorized Users to use the Services and the Documentation during the Subscription Term solely for Company's product research, development and commercialization and business operations (which, for the avoidance of doubt, shall include use by Company's Authorized Users in connection with Company's clinical studies).

4. ADDITIONAL USER SUBSCRIPTIONS

Subject to the Subscription Fees set forth in an applicable executed Schedule, Company may, from time to time during any Subscription Term , purchase additional User Subscriptions in excess of the number set out in a Schedule and Prevail shall grant access to the Services and the Documentation to such additional Authorized Users in accordance with the provisions of this Agreement.

5. COMPANY DATA

5.1 As between Company and Prevail, Company shall solely own all rights, title and interest in and to all of Company Data and shall have sole responsibility for the legality, reliability, integrity (as collected, but not as stored in the Software), accuracy and quality of Company Data.

5.2 Company Data will be hosted, under Prevail's responsibility, in a secure data center certified as ISO/IEC 27001:2013 and SOC 3 - Type II, for computing infrastructures and security. Prevail shall follow its archiving procedures for Company Data as set out in its standard operating procedures (SOPs) and back-up policy which include hosting Company Data at another location in a second secure data center, as such documents may be amended by Prevail in its sole discretion from time to time provided that such amendments do not result in a lower standard for secured hosting of Company Data or adding exceptions to Prevail's responsibility to store Company Data in two secured data centers in different locations. Upon Company's written request, Prevail shall allow Company to review such SOPs and back-up policies relating to hosting of Company's Data. Except in case of breach of its obligations under this Agreement or under applicable law, gross negligence or willful misconduct , in the event of any loss or damage to Company Data, Company's sole and exclusive remedy shall be for Prevail to use reasonable commercial endeavors to restore the lost or damaged Company Data from the latest back-up of such Company Data maintained by Prevail in accordance with the archiving procedure described in its SOPs and back-up policy, a summary of which is set forth in Schedule 2.

6. PREVAIL'S OBLIGATIONS

6.1 Prevail shall, during the Subscription Term, provide the Services and make available the Documentation to Company subject to the terms of this Agreement.

6.2 Prevail undertakes that the Services will be performed substantially in accordance with the Documentation and with reasonable skill and care.

6.3 Prevail represents and warrants that it has not been debarred and has not been convicted of a crime which could lead to debarment, under the Debarment Act. In the event that Prevail or any of its officers, directors, or employees becomes debarred or receives notice of action or threat of action with respect to its debarment, Prevail shall notify Company immediately in writing.

6.4 Prevail shall make the Services available 24 hours a day, seven days a week, except for:

(a) planned maintenance carried out during the maintenance window of 10:00 pm to 2:00 am Eastern Time, USA; and

(b) unscheduled maintenance performed outside Normal Business Hours, provided that Prevail has used reasonable endeavors to give Company at least6 Normal Business Hours' notice in advance.

6.5 Prevail will, as part of the Services and at no additional cost to Company, provide Company with Prevail's standard customer support services in accordance with Prevail's support services policy in effect at the time that the Services are provided. Prevail may amend the support services policy in its sole and absolute discretion from time to time, provided that Prevail will provide Company notice if the change is material and will not reduce an agreed upon support level during the effective period of a Schedule for Services. Unless stated otherwise in an applicable Schedule, Prevail's standard support includes phone support for Authorized Users in the geographies where the clinical study(ies) identified in the Schedule is being conducted. The support is provided by trained Tier 1 support staff on a 24/7/365 basis, who can escalate to Tier 2 support when needed during Normal Business Hours, and all support is governed by Prevail's internal Quality Assurance SOPs. Company may elect to purchase enhanced support services separately at Prevail' s then current rates.

6.6 Prevail will provide the following technical service levels:

(a) downtime shall exclude regularly scheduled maintenance agreed upon in writing by both Parties.

(b) Priority Level Definitions:

(i) Critical: defined as any problem that completely prevents the operation of the Software or Services and for which there is no work-around.

(ii) Priority: defined as any problem that substantially restricts the operations of the Software or Services for which there is no alternative solution or work- around.

(iii) General: defined as any problem that does not substantially restrict the operations of the Software or Services or any other error for which there is an alternative solution or work-around.

Priority Level	Description	Initial Response Time from Notification	Status Updates	Targeted Resolution
Critical	See Definition	15 minutes	Every Hour	As soon as possible not to exceed 4 hours
Priority	See Definition	30 minutes	4 Hours	8 Business hours
General	See Definition	60 minutes	24 Hours	48 hours unless otherwise agreed upon by both parties

The Initial Response Times in the above chart commence from the time Company first notifies Prevail of the problem or failure, while the other times commence from the earlier of first notification by Company of the problem or failure or Prevail otherwise becoming aware of the problem or failure.

6.7 Prevail represents and warrants that it has implemented, uses and will maintain:

(a) such level of security measures, consistent with up-to-date industry standards, to (i) defend against viruses, worms, Trojan horses or other harmful computer code, files, scripts, agents or software that may hinder Company access to and/or damage, interfere with or disrupt the integrity of the Company Data; (ii) help to avoid risk of any third party' s unauthorized access to Company Data (including anti-malware controls); and (iii) protect against loss of Company Data due to power supply failure or line interference;

(b) appropriate technical and organizational measures, internal controls, and information security routines intended to protect Company Data against accidental loss, destruct ion, or alteration; unauthorized disclosure or access; or unlawful destruction;

(c) data recovery procedures, including regular and multiple copies of Company Data (in different places) from which Company Data may be recovered; such redundant storage and Prevail procedures for recovering data are designed to attempt to reconstruct Company Data in its original or last-replicated state from before the time it was lost or destroyed;

(d) reviews of data recovery procedures at least every twelve months; and

(e) measures aimed at protecting Company Data against accidental or unlawful destruction or accidental loss, alteration, unauthorized disclosure or access, and against all unlawful forms of processing; in addition, Prevail agrees that only Prevail's or its subcontractors' technical support personnel are permitted to have access to Company Data when required to perform their job functions.

If Prevail becomes aware of any unlawful access to any Company Data stored by and/or on behalf of Prevail, or unauthorized access to such equipment or facilities resulting in loss, disclosure, or alteration of Company Data ("Security Incident"), Prevail will promptly (1) notify Company of the Security Incident; (2) investigate the Security Incident and provide Company with detailed information about the Security Incident; and (3) promptly take reasonable steps to mitigate the effects and to minimize any damage resulting from the Security Incident. Prevail shall cooperate fully with Company, with its authorized agent and with any regulatory agency and/or any law enforcement agency in the investigation and remediation of such Security Incident. All notices and communications to Company relating to a suspected, alleged, or actual Security Incident shall be the Confidential Information of Company.

6.8 Prevail represents and warrants that, to the extent applicable, it shall comply with the U.S. Health Insurance Portability and Accountability Act, as amended ("HIPAA"), with respect to protected health information as defined under HIPAA, and any other applicable data privacy and protection laws relevant to the Services. Prevail shall limit its use, onward transfer, and further disclosure of any protected personal information to only those activities specified in this Agreement, an executed Schedule, or otherwise expressly authorized by Company.

7. COMPANY' OBLIGATIONS

Company shall:

(a) provide Prevail with reasonably necessary co-operation in relation to this Agreement, including access to such information as may be reasonably necessary for Prevail to render the Services; and

(b) be solely responsible for procuring and maintaining its network connections and telecommunications links from its systems to Prevail's data centers, and all problems, conditions, delays, delivery failures and all other loss or damage arising from or relating to Company's network connections or telecommunications links or caused by the Internet.

8. FEES AND PAYMENT

Company shall pay the Subscription Fees to Prevail for the Software and Services in accordance with the executed Schedule(s).

9. PROPRIETARY RIGHTS

9.1 Company acknowledges and agrees that Prevail and/or its licensors own all intellectual property rights in the Services and the Documentation. Except as expressly stated herein, this Agreement does not grant Company any rights to, or in, patents, copyrights, database rights, trade secrets, trade names, trademarks (whether registered or unregistered), or any other rights or licences in respect to the Services or the Documentation.

9.2 Prevail represents and warrants that it has all the rights in relation to the Software, Services and the Documentation that are necessary to grant all the rights it purports to grant under , and in accordance with, the terms of this Agreement, and that the Software, Services, and Documentation, and Company's access to and use of the Software, Services, and Documentation as contemplated by this Agreement, shall not infringe or misappropriate the intellectual property of any third party.

10. CONFIDENTIALITY

For the purposes herein, "Confidential Information" shall mean any non-public information relating to the business, operations and, more generally, any activities of a Party, that is clearly identified to a receiving Party as confidential information or which the receiving Party should reasonably understand to be confidential information under the circumstances, including know-how, trade secret and, in the case of Company, Company Data.

Each Party shall (i) maintain the confidentiality of the other Party's Confidential Information, using, at a minimum, the same safeguards afforded its own confidential, proprietary trade secrets, but in no event less than reasonable care; (ii) use the other Party' s Confidential Information only to the extent required for the performance of this Agreement; (iii) restrict disclosure and access to the other Party' s Confidential Information only to its employees, suppliers, permitted subcontractors, advisors and consultants who have a need to know for the performance of this Agreement, provided that they are bound by confidentiality and restricted use obligations no less restrictive than those contained herein; and (iv) not disclose, provide, transfer, rent, sublicense, or otherwise make available any portion of the other Party's Confidential Information to any third party except as permitted under (iii) above. The non-disclosure and restricted use obligations shall not apply to information which receiving Party can prove through competent proof (i) is now or hereafter known to the public through no fault of the receiving Party, (ii) was in the possession of the receiving Party prior to disclosure by the disclosing Party, (iii) has been properly obtained without restriction from a third party who is not bound by an obligation of confidentiality, (iv) is independently developed by receiving Party without reference to, use of or reliance upon the disclosing Party's Confidential Information or (v) information disclosed by court order or as otherwise required by law or regulation, provided that the Party required to disclose the information provides prompt advance notice to enable the other Party to seek a protective order or otherwise to prevent such disclosure. The obligations in this article 10 shall continue indefinitely after the expiration or termination of this Agreement.

11. LIMITATION OF LIABILITY

NEITHER PARTY SHALL BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITNE, OR CONSEQUENTIAL DAMAGES, OR ANY LOSS OF REVENUE OR PROFITS (EXCLUDING FEES UNDER THE AGREEMENT), DATA, OR DATA USE. PREVAIL'S MAXIMUM LIABILITY FOR ANY DAMAGES ARISING OUT OF OR RELATED TO THIS AGREEMENT, THE SOFTWARE OR SERVICES, WHETHER IN CONTRACT OR TORT, OR OTHERWISE, SHALL IN NO EVENT EXCEED, IN THE AGGREGATE, THE TOTAL AMOUNTS ACTUALLY PAID TO PREVAIL FOR THE SOFTWARE AND SERVICES UNDER THIS AGREEMENT THAT IS THE SUBJECT OF THE CLAIM IN THE TWELVE (12) MONTH PERIOD IMMEDIATELY PRECEDING THE EVENT GIVING RISE TO SUCH CLAIM.

12. TERM AND TERMINATION

12.1 This Agreement shall commence on the Effective Date and shall continue for the Initial Subscription Term and, thereafter, this Agreement shall be automatically renewed for successive periods of 12 months (each a **Renewal Period),** unless:

(a) either Party notifies the other Party of termination, in writing, at least 60 days before the end of the Initial Subscription Term or any Renewal Period, in which case this Agreement shall terminate upon the expiry of the applicable Initial Subscription Term or Renewal Period; or

(b) otherwise terminated in accordance with the provisions of this Agreement;

and the Initial Subscription Term together with any subsequent Renewal Periods shall constitute the **Subscription Term.**

12.2 Without prejudice to any other rights or remedies to which the parties may be entitled, either Party may terminate this Agreement without liability to the other if the other Party commits a material breach of any of the te1ms of this Agreement and (if such a breach is remediable) fails to remedy that breach within 30 days of that Party being notified in writing of the breach.

12.3 On termination of this agreement for any reason :

(a) all licenses granted under this Agreement shall immediately terminate;

(b) each Party shall return and make no further use of any equipment, property, Documentation and other items (and all copies of them) belonging to the other Party;

(c) Company shall provide Prevail written instructions within 30 days, with which Prevail shall comply, to either return Company Data or dispose of Company Data at Company's reasonable expense. If Company Data is being returned to Company, Prevail shall use reasonable commercial endeavors to deliver the then most recent back-up of Company Data to Company within 45 days of its receipt of such a written request, provided that Company has, at that time, paid all fees and charges outstanding at and resulting from termination (whether or not due at the date of termination); and

(d) the accrued rights of the parties as of the time of termination, and the continuation after termination of any provision expressly stated to survive or implicitly surviving termination, shall not be affected or prejudiced.

13. ENTIRE AGREEMENT AND C OUNTERPARTS

This agreement, and any documents referred to in it, constitute the whole agreement between the parties and supersede any previous arrangement, understanding or agreement between them relating to the subject matter they cover.

This Agreement (including its Schedules) may be executed in any number of counterparts, all of which together shall constitute a single document. This Agreement and its Schedules may be executed by facsimile or digital file showing a Party' s signature (e.g., a .pdf). Such facsimile or digital file shall be deemed an original and fully enforceable and admissible in any legal proceeding.

14. M ODIFICATION AND ASSIGNMENT

No supplement or modification of this Agreement shall be binding unless executed in writing by both parties.

Neither Party shall, without the prior written consent of the other Party, assign, transfer, charge, or sub-contract all or any of its rights or obligations under this Agreement; provided that either Party may assign its rights and delegate its duties under this Agreement, in whole or in part, to an affiliate or to a successor to such Party' s business by merger , acquisition, purchase of the business related to this Agreement or other similar corporate transaction.

15. NOTICES

Any notice required to be given under this Agreement shall be in writing and shall be delivered by hand or overnight delivery to the other Party at its address set out in this Agreement, or such other address as may have been notified by that Party for such purposes .

This Agreement has been entered into on the date stated at the beginning of it.

XORTX THERAPEUTICS, INC.		**PREVAIL INFOWORKS, INC.**	
By:	/s/ Allen Davidoff	By:	/s/ Jack Houriet
Name:	Allen Davidoff	Name:	Jack Houriet
Title:	CEO	Title:	CEO
Date:	Feb 24, 2020	Date:	27 Feb 2020

Indirect/Pass-Through Expenses: Indirect/Pass-Through Expenses shall be invoiced to Company as they are incurred, and Prevail InfoWorks shall provide Company with supporting documentation of such Indirect/Pass-Through Expenses. An upfront payment for the estimated Indirect/Pass-Through Expenses in the amount of 20% of said estimate will be invoiced upon Prevail's receipt of the Authorization to Proceed Notice which will be applied to the final Indirect/Pass-Through Expenses incurred.

Invoices and Payment: Invoices shall include the protocol/project number and a detailed description of the deliverables for which the Prevail is seeking payment. Prevail will email invoices to: XORTX Therapeutics, Inc. Attention: Allen Davidoff. Company will pay Prevail by wire transfer, EFT, ACH and/or check as instructed on the invoice. Invoices are due and payable thirty (30) days upon Company's receipt of an invoice.

Satisfaction Guarantee

All Instalment Fees are subject to an unconditional 100% satisfaction guarantee. If Company is not fully satisfied with any Software and Service Deliverables under this Agreement during a monthly Subscription period, it has no obligation to pay Prevail the monthly fee for that period. All Company must do to invoke this guarantee is notify Prevail in writing, with a brief description of its dissatisfaction with the Software and Services, at least 5 business days before the due date of the monthly fee payment.

XORTX THERAPEUTICS, INC.

By: /s/ Allen Davidoff
Name: Allen Davidoff
Title: CEO
Date: Feb 24, 2020

PREVAIL INFOWORKS, INC.

By: /s/ Jack Houriet
Name: Jack Houriet
Title: CEO
Date: 27 Feb 2020

Confidential

Schedule 2 — Summary of Business Continuity and Disaster Recovery Plan

All employees are trained and retrained annually on BC/DR procedures.

Prevail's Production, Test and Development Systems data backup and recovery process is as follows:

- All back up processes are automated with system confirmations/errors sent to IT staff.
- Databases are backed up nightly in the primary data center and copied to secondary data center.
- Transaction logs are backed up hourly, with local copies done once a minute.
- Full monthly backups are maintained indefinitely.
- Daily backups are maintained for two weeks.
- Backups are also done before any system upgrades. Scheduled system maintenance is done overnight on the first Sunday of each month.
- Virtual Server Images are backed up daily, and copied to secondary data center, and a third off- site location. (This actually includes all data in the system at that time.)
- Virtual Server Images are maintained for 10 days.
- Data can be fully restored from a point in time no greater than 60 seconds prior to an event.
- Virtual Severs themselves can be restored from a point in time no greater than 24 hours from an event.
- All systems can be restored at the primary or secondary sites in the event of a disaster.

All Primary systems are virtualized in a physical hosting facility that is certified as ISO/IEC 2700l:2013 and SOC 3 - Type II. Both Primary and Secondary physical hosts are globally-redundant systems providers.

All business systems are fully virtualized with a large multi-national company with globally-redundant storage.

In the event of a disaster that prevents physical office access or limits use, all business and production systems are fully accessible to remote users via secure VPN tunnels.

Confidential

Exhibit 10.7

February 24, 2020

Prevail InfoWorks, Inc.
Attn: Jack Houriet, CEO
211 North 13th Street, 6th Floor
Philadelphia, PA 19107

Prevail Partners LLC
Attn: Mary Schaheen, President

Re: Side Letter to Master Services and Technology Agreement

Ladies and Gentlemen:

Reference is made to the Master Services and Technology Agreement by and between Prevail InfoWorks, Inc. ("InfoWorks") and XORTX Therapeutics, Inc. ("XORTX"), dated as of the date hereof (the "Agreement"). The purpose of this side letter agreement (this "Side Letter") is to memorialize and confim1 InfoWorks' , XORTX ' s and Prevail Partners LLC' s ("Partners") understanding with respect to the payment of the Contract Signature Payments under the Agreement. Capitalized terms used but not otherwise defined herein shall have the meanings set forth in the Agreement.

Background

WHEREAS, pursuant to the terms of the Agreement, XORTX agreed to pay to InfoWorks two Contract Signature Payments for the two clinical trials covered by the Agreement,

WHEREAS, Partners, an affiliate of InfoWorks, has agreed to to InfoWorks on XORTX' s behalf, in satisfaction of the Contract Signature Payments; and

WHE REAS, subject to the execution of this Side Letter by InfoWorks and Partners, XORTX has agreed to issue to (the "Units"), pursuant to the terms of a Subscription Agreement entered into by and between Partners and XORTX, dated as of the date hereof (the "Subscription Agreement"), each Unit comprised of one common share ("Common Share') and one common share purchase warrant (" Warrant") of XORTX.

NOW, THEREFORE, in consideration of the mutual promises set forth herein, and intending to be legally bound, InfoWorks, XORTX and Partners hereby agree as follows:

Terms

1. Upon the execution of this Side Letter, the parties hereto agree that Partners will on behalf of XORTX for the Contract Signature Payments set forth on the initial invoice under the Agreement, and that InfoWorks will apply this payment towards the initial payment due under the Agreement.

2. In consideration for Partners' payment of the Contract Signature Payments to InfoWorks, , and Partners shall have no further payment obligations related to the purchase of the Units under the Subscription Agreement.

3. Absent mutual agreement between Partners and XORTX, Partners agrees not to sell any issued Units (or any Common Shares or Warrants underlying the Units, or Common Shares underlying the Warrants) on any public stock exchange (including the Canadian Securities Exchange) while InfoWorks is working with XORTX on the two clinical trials that are covered by the Agreement.

4. Notwithstanding anything to the contrary contained in the Agreement, InfoWorks, XORTX and Partners acknowledge and agree that the issuance of the Common Shares and Warrants comprising the Units to Partners satisfies any existing and/or ongoing financial obligations of XORTX to make the Contract Signature Payments under the Agreement, and upon receipt of the Common Shares and Warrants comprising the Units by Partners, XORTX shall have no other or continuing obligations to InfoWorks or Partners in respect of the Contract Signature Payments.

Except as specifically provided for in this Side Letter, all of the terms and conditions of the Agreement shall remain the same and in full force and effect. This Side Letter shall be governed by and construed in accordance with the laws of the Province of Alberta. This Side Letter and the Agreement contain the entire agreement between the parties hereto with respect to the subject matter hereof. This Side Letter may be executed in counterparts, including by electronic transmission, each of which shall be deemed to be an original, but both of which shall constitute the same agreement.

[Signatures on following page]

If the above accurately reflects our agreement, please sign where indicated below and return to me, and XORTXwill issue the Common Shares and Warrants comprising the Units promptly.

Sincerely,

XORTX THERAPEUTICS INC.

By: /s/ Allen Davidoff
Name: Allen Davidoff
Title: President & CEO

ACCEPTED AND AGREED:

PREVAIL INFOWORKS, INC.

By: /s/ Jack Houriet
Name: Jack Houriet
Title: CEO

PREVAIL PARTNERS, LLC

By: /s/ Mary Schaheen
Name: Mary Schaheen
Title: President

[Side Letter - Master Services and Technology Agreement]

Exhibit 10.8

CANADA, UNITED STATES AND INTERNATIONAL

SUBSCRIPTION AGREEMENT

TO: XORTX THERAPEUTICS INC. (the "Corporation")

The undersigned (hereinafter referred to as the **"Subscriber")** hereby irrevocably subscribes for and agrees to purchase the number of units of the Corporation set forth below (the **"Units")** for the aggregate subscription price set forth below (the **"Aggregate Subscription Price"),** representing a subscription price of Cdn. $0.14 per Unit, upon and subject to the terms and-conditions set forth in "Terms and Conditions of Subscription for Units of the Corporation" attached hereto (the **"Terms and Conditions",** and together with this page and the attached exhibits, the **"Subscription Agreement").** Each Unit will be comprised of one common share of the Corporation **("Common Share")** and one Common Share purchase warrant of the Corporation **("Warrant").** Each Warrant entitles the holder to purchase one Common Share **('Warrant Share")** at a price of Cdn. $0.25 per Warrant Share for a period of one year following the Closing Date (as defined herein), provided, however, that, if, at any time following the expiry of the statutory four month plus one day hold period (the **"Hold Period"),** the closing price of the common shares on the Canadian Securities Exchange (the "Exchange") (or such other exchange as the shares of the Corporation are listed on) is greater than $0.35 for 10 or more consecutive trading days, the Warrants will be accelerated and the Warrants will expire on the 20th Business Day following the date of such notice. **In addition to this face page, the Subscriber must also complete the applicable sections of the Terms and Conditions and the exhibits attached hereto, if applicable.**

Notice is provided to the Subscriber and the Subscriber acknowledges that unless permitted under securities legislation, the holder of the Common Shares and Warrants underlying the Units acquired hereunder or Warrant Shares underlying the Warrants (including the Subscriber) must not trade such securities before the date that is four months and a day after the Closing Date.

Prevail Partners LLC
(Name of Subscriber - please print

By: /s/ Mary Schaheen
(Authorized signature)

President and Director
(Official Capacity or Title - please print)

Mary Schaheen
(Please print name of individual whose signature appears above if different than the name of the subscriber printed above.)

211 North 13th Street, Sixth Floor
(Subscriber's Address)

Philadelphia, PA 19107

(Telephone Number)

(E-Mail Address)

Number of Units: 8,571,428

Aggregate Subscription Price: Cdn. $ 1,602,132
(or USD 1,200,000)

If the Subscriber is signing as agent for a principal and is not deemed to be purchasing as principal pursuant to NI 45-106 (as defined herein) by virtue of being either: (i) a trust company or trust corporation acting on behalf of a fully managed account managed by the trust company or trust corporation; or (ii) a person acting on behalf of a fully managed account managed by it, and in each case satisfying the criteria set forth in **NI 45 - 106 or Section 73.3 of the *Securities Act* (Ontario), as applicable, complete the following and ensure that Exhibits are completed in respect of such principal ("Disclosed Beneficial Purchaser"):**

(Name of Disclosed Beneficial Purchaser)

(Disclosed Beneficial Purchaser's Address)

(Disclosed Beneficial Purchaser's E-Mail Address)

Register the Common Shares and Warrants as set forth below:

Prevail Partners LLC
(Name)
NIA
(Account reference, if applicable)
211 North 13th Street, Sixth Floor
(Address)
Philadelphia, PA 19107 USA

Deliver the certificates representing the Commori Shares and Warrants as set forth below:

Prevail Partners LLC
(Name)
NIA
(Account reference, if applicable)
Patrick Keenan
(Contact Name)
211 North 13th Street, Sixth Floor
(Address)
Philadelphia, PA 19107 USA

The Subscriber or, if applicable, the Disclosed Beneficial Purchaser currently holds:

_____ Common Shares; and

_____ securities convertible into Common Shares.

The Subscriber or, if applicable, the Disclosed Beneficial Purchaser, is (please check the applicable box(es)):

☐ an "insider" of the Corporation (as such term is described in the *Securities Act* (British Columbia))
☐ a "registrant" (as such term is described in the *Securities Act* (British Columbia))
☐ a Dealer pursuant to the policies of the Canadian Securities Exchange

This is the first page of an agreement comprised of 16 pages (not including Exhibits).

ACCEPTANCE: The Corporation hereby accepts the subscription as set forth above on the terms and conditions contained in this Subscription Agreement.

Dated _____, 2020.

XORTX THERAPEUTICS INC.

By: _____
Authorized Signatory

**TERMS AND CONDITIONS OF SUBSCRIPTION FOR
UNITS OF THE CORPORATION**

Terms of the Offering

1. The Subscriber acknowledges (on its own behalf and, if applicable, on behalf of each Disclosed Beneficial Purchaser on whose behalf the Subscriber is contracting) that this subscription is subject to rejection or allotment by the Corporation in whole or in part at any time. If this subscription is rejected by the Corporation, this subscription and all monies tendered therewith shall be returned forthwith to the Subscriber, without interest or deduction.

2. The Subscriber acknowledges (on its own behalf and, if applicable, on behalf of each Disclosed Beneficial Purchaser on whose behalf the Subscriber is contracting) that the Units subscribed for by it hereunder form part of a larger issuance and sale by the Corporation of an aggregate of up to 36,000,000 Units, at an issue price of $0.14 per Unit, for aggregate gross proceeds of up to approximately
$5,040,000 (the "**Offering**").

3. The Subscriber is required to deliver the Aggregate Subscription Price prior to the Closing Date (as defined herein). The Subscriber's obligation to provide the full amount of the Aggregate Subscription Price is irrevocable.

Terms of the Units

4. Each Unit is comprised of one Common Share and one Warrant. The Common Shares and the Warrants comprising the Units will separate immediately upon the closing of the Offering.

5. The Warrants will be created and issued pursuant to the terms of a definitive certificate representing the Warrants. The Warrants shall be subject to such other terms and conditions as may be determined by the Corporation and to the definitive terms of the warrant certificate.

6. Each Warrant entitles the holder thereof to purchase one Warrant Share at an exercise price of
$0.25 per Warrant Share at any time prior to 4:30 p.m. (Calgary time) on or before the date that is one year following the Closing Date, provided, however, that, if, at any time following the expiry of the Hold Period, the closing price of the common shares on the Exchange (or such other exchange as the shares of the Corporation are listed on) is greater than $0.35 for 10 or more consecutive trading days, the Warrants will be accelerated and the Warrants will expire on the 20th business day following the date of such notice.

Representations, Warranties and Covenants of the Subscriber

7. The Subscriber (on its own behalf and, if applicable, on behalf of each Disclosed Beneficial Purchaser on whose behalf the Subscriber is contracting) (and for the purpose of the following representations, warranties and covenants, any reference to the "Subscriber" or "it" includes the Subscriber and each Disclosed Beneficial Purchaser on whose behalf the Subscriber is contracting) represents, warrants and covenants to the Corporation and its counsel (and acknowledges that the Corporation and its counsel are relying thereon) both at the date hereof and at the Closing Time (as defined herein) that:

(a) it has been independently advised as to restrictions with respect to trading in the Common Shares, Warrants and Warrant Shares (collectively, the "**Offered Securities**") imposed by applicable securities legislation in the jurisdiction in which it resides, confirms that no representation (written or verbal) has been made to it by or on behalf of the Corporation with respect to the foregoing, acknowledges that it is aware of the characteristics of the Offered Securities, the risks relating to an investment therein and of the fact that it not be able to resell the Offered Securities except in accordance with limited exemptions under applicable securities legislation and regulatory policy until expiry of the applicable restricted period and compliance with the other requirements of applicable law; and it agrees that any certificates representing the Offered Securities shall bear a legend indicating that the resale of such securities is restricted; and **the Subscriber further acknowledges that it has been advised to consult its own legal counsel in its jurisdiction of residence for full particulars of the resale restrictions applicable to it and it is the Subscriber's responsibility to comply with such restrictions before selling the Offered Securities;** and

(b) the Subscriber acknowledges that any certificates representing the Offered Securities will bear the following legends indicating that the resale of such securities is restricted in accordance with applicable securities legislation:

"*UNLESS PERMITTED UNDER SECURITIES LEGISLATION, THE HOLDER OF THIS SECURITY MUST NOT TRADE THE SECURITY BEFORE THE DATE THAT IS 4 MONTHS AND A DAY AFTER THE [THE CLOSING DATE]*."; and

(c) the Subscriber further acknowledges that:

(i) the Subscriber, in making the decision to invest in the Offered Securities, has relied solely upon the information provided in this Subscription Agreement and the Subscriber's own investigation of the Corporation, which investigation has provided the Subscriber with all the information the Subscriber has deemed necessary for the purposes of its investment decision, and not upon any oral or other written representation as to fact or otherwise made by or on behalf of the Corporation or otherwise;

(ii) it has not received or been provided with, nor has it requested, nor does it have any need to receive, any offering memorandum, registration statement, prospectus, sales or advertising literature or any other document;

(iii) it has received all the information that it considers necessary or appropriate for deciding whether to purchase the Offered Securities and understands that any discussions with representatives of the Corporation, as well as any information issued by the Corporation, were intended to describe certain aspects of the Corporation's business and prospects, but were not necessarily a thorough or exhaustive description;

(iv) any business plans prepared by the Corporation have been, and continue to be, subject to change and any projections included in such business plans or otherwise are necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying the projections will not materialize or will vary significantly from actual results; and

(v) it has carefully read and reviewed this Subscription Agreement and has asked such questions of management of the Corporation and received all information as deemed necessary for it to make an informed decision with respect to the investment hereunder; and

(d) it has not become aware of and the purchase of the Units is not made through or as a result of any general solicitation or any advertisement in printed media of general and regular paid circulation (or other printed public media), radio, television or telecommunications or other form of advertisement (including electronic display such as the Internet) with respect to the distribution of the Units; and

(e) unless it is purchasing under subsection 7(g), it is purchasing the Units as principal for its own account, not for the benefit of any other person, for investment only and not with a view to the resale or distribution of all or any of the securities, it is resident in the jurisdiction set out as the "Subscriber's Address" on the face page hereof and if the Subscriber is acting as agent for a Disclosed Beneficial Purchaser, such Disclosed Beneficial Purchaser is resident in the jurisdiction set forth in the Subscription Agreement as the "Principal's Address", and it or, if the Subscriber is acting as agent for a Disclosed Beneficial Purchaser, the Disclosed Beneficial Purchaser fully complies with one or more of the criteria set forth below:

(i) it is resident in **one of the provinces or territories of Canada**, and it is an "*accredited investor*", as such term is defined: (A) if the Subscriber is resident in or otherwise subject to the applicable securities laws of a jurisdiction of Canada other than Ontario, in National Instrument 45-106 entitled "Prospectus Exemptions" ("**NI 45-106**") promulgated under applicable securities legislation in such jurisdictions; or (B) if the Subscriber is resident in or otherwise subject to the applicable securities laws of Ontario, in Section 73.3(1) of the *Securities Act* (Ontario), it was not created or used solely to purchase or hold securities as an accredited investor as described in paragraph (m) of the definition of "accredited investor" in NI 45-106, and it has concurrently executed and delivered a Representation Letter in the form attached as **Exhibit 1** to this Subscription Agreement and specifically represents and warrants that one or more of the categories set forth in **Appendix A** attached to the Representation Letter correctly, and in all respects, describes the Subscriber, and will describe the Subscriber as at the Closing Date, and the Subscriber has so indicated by initialing beside the category in such **Appendix A** which so describes it, and, if applicable, has completed the Accredited Investor Risk Acknowledgment Form in the form attached as **Appendix B** to the Representation Letter; or

(ii) it is resident in **one of the provinces or territories of Canada** and the acquisition cost to the Subscriber of purchasing the Units is not less than $150,000 paid in cash at the time of the trade and it was not created or used solely to purchase or hold securities in reliance on this exemption from the prospectus requirement and it is one of the following and the Subscriber has so indicated by initialing the applicable paragraph:

____ (I) a corporation that pre-existed the Offering and has a *bona fide* purpose other than the investment in the Offered Securities; or

____ (II) a partnership, trust, fund and or association, syndicate organization or other organized group of persons, whether incorporated or not, that pre-existed the Offering of the Units and has a *bona fide* purpose other than the investment in the Offered Securities; or

____ (III) an individual or other person in that person's capacity as a trustee, executor, administrator or personal or other legal representative; or

(iii) it is resident in **one of the provinces or territories of Canada** and is one of the following and the Subscriber has so indicated by initialing the applicable paragraph:

____ (I) a "**director**", "**executive officer**" or "**control person**" (as such terms are defined in the *Securities Act* (British Columbia) or NI 45-106 and reproduced in Appendix A to **Exhibit 1** of this Subscription Agreement) of the Corporation, or of an "affiliate" (as such term is defined in NI 45-106 and reproduced in Appendix A to **Exhibit 1** of this Subscription Agreement) of the Corporation; or

____ (II) a "**spouse**" (as such term is defined in NI 45-106 and reproduced in Appendix A to **Exhibit 1** of this Subscription Agreement), parent, grandparent, brother, sister, child or grandchild of any person referred to in subparagraph (I) above; or

____ (III) a parent, grandparent, brother, sister, child or grandchild of the spouse of any person referred to in subparagraph (I) above; or

____ (IV) a "**close personal friend**" of any person referred to in subparagraph (I) above, and it certifies to the Corporation that it has reviewed and understands the guidance respecting the meaning of the phrase "close personal friend" set forth in **Exhibit 2** hereto and has provided the details of that relationship in the Questionnaire attached hereto in **Exhibit 2** and, **if the Subscriber is resident in or otherwise subject to the applicable securities laws of Saskatchewan**, the Subscriber has concurrently executed and delivered a Risk Acknowledgement Form in the form attached as **Exhibit 3** to this Subscription Agreement; or

____ (V) a "**close business associate**" of any person referred to in subparagraph (I) above, and it certifies to the Corporation that it has reviewed and understands the guidance respecting the meaning of the phrase "close business associate" set forth in **Exhibit 2** hereto and has provided the details of that relationship in the Questionnaire attached hereto in **Exhibit 2** and **if the Subscriber is resident in or otherwise subject to the applicable securities laws of Saskatchewan**, the Subscriber has concurrently executed and delivered a Risk Acknowledgement Form in the form attached as **Exhibit 3** to this Subscription Agreement; or

____ (VI) a "**founder**" (as such term is defined in NI 45-106 and reproduced in Appendix A to **Exhibit 1** of this Subscription Agreement) of the Corporation or a spouse, parent, grandparent, brother, sister, child, close personal friend or close business associate of a founder of the Corporation, and, if the Subscriber is a close personal friend or close business associate of a founder of the Corporation, has provided the details of that relationship in the Questionnaire attached hereto in **Exhibit 2** and **if the Subscriber is resident in or otherwise subject to the applicable securities laws of Saskatchewan**, the Subscriber has concurrently executed the Risk Acknowledgement Form attached as **Exhibit 3** to this Subscription Agreement;

____ (VII) a parent, grandparent, brother, sister, child or grandchild of the spouse of a founder of the Corporation; or

____ (VIII) a person of which a majority of the voting securities are beneficially owned by, or a majority of directors are, persons or companies described in subparagraphs (I) through (VII) above, and if the Subscriber is relying on persons who are close personal friends or close business associates of a director, executive officer, control person or founder of the Corporation, has provided the details of that relationship in the Questionnaire attached hereto in **Exhibit 2** and **if the Subscriber is resident in or otherwise subject to the applicable securities laws of Saskatchewan**, the Subscriber has concurrently executed the Risk Acknowledgement Form attached as **Exhibit 3** to this Subscription Agreement; or

____ (IX) a trust or estate of which all of the beneficiaries or a majority of the trustees or executors are persons or companies described in subparagraphs (I) through (VII) above, and if the Subscriber is relying on persons who are close personal friends or close business associates of a director, executive officer, control person or founder of the Corporation, has provided the details of that relationship in the Questionnaire attached hereto in **Exhibit 2** and **if the Subscriber is resident in or otherwise subject to the applicable securities laws of Saskatchewan**, the Subscriber has concurrently executed the Risk Acknowledgement Form attached as **Exhibit 3** to this Subscription Agreement,

and in the case of a Subscriber **resident in or otherwise subject to applicable securities laws of Ontario**, then the Subscriber has completed and executed **Exhibit 4** to this Subscription Agreement, which has also been completed and executed by the other persons specified as follows:

(A) an executive officer of the Corporation other than the Subscriber;

(B) if the Subscriber is a person referred to under paragraph 7(e)(iii)(II), the director, executive officer or control person of the Corporation or an affiliate of the Corporation who has the specified relationship with the Subscriber;

(C) if the Subscriber is a person referred to under paragraph 7(e)(iii)(III), the director, executive officer or control person of the Corporation or an affiliate of the Corporation whose spouse has the specified relationship with the Subscriber;

(D) if the Subscriber is a person referred to under paragraph 7(e)(iii)(IV) or 7(e)(iii)(V), the director, executive officer or control person of the Corporation or an affiliate of the Corporation who is a close personal friend or a close business associate of the Subscriber; and

(E) the founder of the Corporation, if the Subscriber is a person referred to in paragraph 7(e)(iii)(VI) or 7(e)(iii)(VII) other than the founder of the Corporation; or

(iv) if it is a resident or otherwise subject to applicable securities laws of **any jurisdiction referred to in the preceding paragraphs** but not purchasing thereunder, it is purchasing pursuant to an exemption from prospectus and registration requirements (particulars of which are enclosed herewith) available to it under applicable securities legislation and shall deliver to the Corporation such further particulars of the exemption(s) and the Subscriber's qualifications thereunder as the Corporation or their counsel may request; or

(v) it is a "U.S. Purchaser." "**U.S. Purchaser**" means (a) any "U.S. person" as defined in Regulation S of the United States Securities Act of 1933, as amended (the "**U.S. Securities Act**"), (b) any person purchasing securities on behalf of any "U.S. Person" or any person in the United States, (c) any person that receives or received an offer of the securities while in the United States, (d) any person that is in the United States at the time the purchaser's buy order was made or this subscription agreement was executed or delivered. "U.S. person" includes but is not limited to (i) any natural person resident in the United States; (ii) any partnership or corporation organized or incorporated under the laws of the United States; (iii) any partnership or corporation organized outside the United States by a U.S. person principally for the purpose of investing in securities not registered under the U.S. Securities Act, unless it is organized or incorporated, and owned, by accredited investors who are not natural persons, estates or trusts; and (iv) any estate or trust of which any executor or administrator or trustee is a U.S. person; and

(A) it and each person on whose behalf the Subscriber is contracting has concurrently executed and delivered to the Corporation the "**Certification of U.S. Purchaser" in the form attached hereto as Exhibit 5 to this Subscription Agreement**, which is incorporated into and forms a part of this Subscription Agreement; and

(B) it and each person on whose behalf the Subscriber is contracting has concurrently executed and delivered to the Corporation the **Representation Letter in the form attached as Exhibit 1 to this Subscription Agreement**, which is incorporated into and forms a part of this Subscription Agreement; and.

(f) if the Subscriber is resident in or otherwise subject to applicable securities laws of a **jurisdiction other than Canada or the United States**, the Subscriber confirms, represents and warrants that:

(i) it is an "accredited investor", as such term is defined in NI 45-106, it was not created or used solely to purchase or hold securities as an accredited investor as described in paragraph (m) of the definition of "accredited investor" in NI 45-106 and it has concurrently **executed and delivered a Representation Letter in the form attached as Exhibit 1 to this Subscription Agreement** and specifically represents and warrants that one or more of the categories set forth in Appendix A attached to the Representation Letter correctly, and in all respects, describes the Subscriber, and will describe the Subscriber as at the Closing Date (as defined herein) and the Subscriber has so indicated by initialing beside the category in such Appendix A which so describes it, and,

if applicable, has completed the Accredited Investor Risk Acknowledgment Form in the form attached as Appendix B to the Representation Letter; and

(ii) the Subscriber is knowledgeable of, or has been independently advised as to, the applicable securities laws of the jurisdiction in which the Subscriber is resident (the "**International Jurisdiction**") and which would apply to the acquisition of the Offered Securities; and

(iii) the Subscriber is purchasing the Units pursuant to exemptions from the prospectus or registration requirements or equivalent requirements under applicable securities laws or, if such is not applicable, the Subscriber is permitted to purchase the Units under the applicable securities laws of the International Jurisdiction without the need to rely on any exemptions; and

(iv) the applicable securities laws of the International Jurisdiction do not require the Corporation to make any filings or seek any approvals of any kind whatsoever from any securities regulator of any kind whatsoever in the International Jurisdiction in connection with the sale of the Units or the issue or resale of the Offered Securities; and

(v) the purchase of the Units by the Subscriber does not trigger:

(A) any obligation to prepare and file a prospectus or similar document, or any other report with respect to such purchase in the International Jurisdiction; or

(B) any continuous disclosure reporting obligation of the Corporation in the International Jurisdiction; and

(vi) the Subscriber will, if requested by the Corporation, deliver to the Corporation either or both: (A) a certificate or opinion of local counsel from the International Jurisdiction which will confirm the matters referred to above (and such other matters as maybe reasonably be requested by the Corporation or its legal counsel) to the satisfaction of the Corporation, acting reasonably; and/or (B) such other evidence of compliance with all aforementioned matters as the Corporation or its legal counsel may request; and

(g) if it is not purchasing as principal, it has disclosed the name of the Disclosed Beneficial Purchaser on the face-page of this Subscription Agreement, it is duly authorized to enter into this Subscription Agreement and to execute and deliver all documentation in connection with the purchase on behalf of each Disclosed Beneficial Purchaser, each of whom is purchasing as principal for its own account, not for the benefit of any other person, and not with a view to the resale or distribution of all or any of the Offered Securities, it acknowledges that the Corporation is required by law to disclose to certain regulatory authorities the identity of each Disclosed Beneficial Purchaser of Units for whom it may be acting, and it is resident in the jurisdiction set out as the "Subscriber's Address" and each Disclosed Beneficial Purchaser is resident in the jurisdiction set out as the "Disclosed Beneficial Purchaser's Address" and:

(i) it is resident in or otherwise subject to applicable securities laws of **one of the provinces or territories of Canada** and it is an "accredited investor" as such term is defined in paragraphs (p) or (q) of the definition of "accredited investor" in NI 45-106 and reproduced in **Appendix A** to **Exhibit 1** of this Subscription Agreement (provided, however, that it is not a trust company or trust corporation registered under the laws of Prince Edward Island that is not registered or authorized under the *Trust and Loan Companies Act* (Canada) or under comparable legislation in another jurisdiction in Canada) and is therefore deemed to be purchasing as principal pursuant to NI 45-106 and it has concurrently executed and delivered a Representation Letter in the form attached hereto as **Exhibit 1** and has initialed in **Appendix A** thereto indicating that the Subscriber satisfies one of the categories of "accredited investor" set out in paragraphs (p) or (q) of **Appendix A** thereto; or

(ii) subject to securities laws applicable to the Subscriber, it is acting as agent for one or more Disclosed Beneficial Purchasers, each of such principals is purchasing as principal for its own account, not for the benefit of any other person, for investment only, and not with a view to the resale or distribution of all or any of the Offered Securities, and each of such principals complies with subparagraphs (i), (ii), (iii), (iv) or (v) of paragraph 7(e) hereof as are applicable to it; and

(h) it (and any Disclosed Beneficial Purchaser for whom it is acting) acknowledges that:

(i) no securities commission or similar regulatory authority has reviewed or passed on the merits of the Offered Securities; and

(ii) there is no government or other insurance covering the Offered Securities; and

(iii) there are risks associated with the purchase of Units and investment in the Offered Securities; and

(iv) there are restrictions on the Subscriber's ability to resell the Offered Securities and it is the responsibility of the Subscriber to find out what those restrictions are and to comply with them before selling any of those securities; and

(v) the Corporation may complete additional financings in the future in order to develop the proposed business of the Corporation and to fund its ongoing development. There is no assurance that such financing will be available and if available, on reasonable terms. Any such future financings may have a dilutive effect on current shareholders, including the Subscriber; and

(vi) the Corporation has advised the Subscriber that the Corporation is relying on an exemption from the requirements to provide the Subscriber with a prospectus and to sell securities through a person or company registered to sell securities under the *Securities Act* (British Columbia) and other applicable securities laws and, as a consequence of acquiring the Common Shares and Warrants pursuant to this exemption, certain protections, rights and remedies provided by those securities laws, including statutory rights of rescission or damages, will not be available to the Subscriber; and

(i) the Subscriber has not received from the Corporation any financial assistance of any kind, directly or indirectly, in connection with its purchase of Units hereunder; and

(j) the Subscriber has not and will not enter into any voting trust or similar agreement that has the effect of directing the manner in which the votes attached to the Offered Securities purchased pursuant to this Subscription Agreement may be voted following the Closing Date; and

(k) it is aware that the Offered Securities have not been and will not be registered under the U.S. Securities Act or the securities laws of any state, territory or possession of the United States and that these securities may not be offered or sold, directly or indirectly in the United States without registration under the U.S. Securities Act or compliance with requirements of an exemption from registration and the applicable laws of the applicable states and acknowledges that the Corporation has no present intention of filing a registration statement under the U.S. Securities Act in respect of the Common Shares, Warrants or Warrant Shares; and

(l) unless the Subscriber is completing the "Certification of U.S. Purchaser" in the form attached hereto as **Exhibit 5** to this Subscription Agreement, the Units have not been offered to the Subscriber in the United States, and the individuals making the order to purchase the Units and executing and delivering this Subscription Agreement on behalf of the Subscriber were not in the United States when the order was placed and this Subscription Agreement was executed and delivered; and

(m) unless the Subscriber is completing the "Certification of U.S. Purchaser" in the form attached hereto as **Exhibit 5** to this Subscription Agreement, it is not a U.S. Purchaser; and

(n) it (and, if applicable, any Disclosed Beneficial Purchaser) undertakes and agrees that it will not offer or sell any of the Offered Securities in the United States unless such securities are registered under the U.S. Securities Act and the securities laws of all applicable states of the United States or an exemption from such registration requirements is available and further that it will not resell any of the Offered Securities subscribed for hereunder except in accordance with the provisions of applicable securities legislation, regulations, rules, policies and orders and stock exchange rules; and

(o) if it is not an individual: (i) it has the legal capacity to authorize, execute, be bound by and deliver this Subscription Agreement, and (ii) the individual signing this Subscription Agreement has been duly authorized to execute and deliver this Subscription Agreement, and (iii) all necessary approvals of directors, officers, shareholders or otherwise have been given and obtained; and

(p) if it is an individual, it is of the full age of majority in the jurisdiction in which it is resident and is legally capable and competent to execute and be bound by this Subscription Agreement and take all action and to perform the covenants and obligations pursuant hereto; and

(q) the Subscriber has had adequate time to review this Subscription Agreement; and

(r) this Subscription Agreement has been duly and validly authorized, executed and delivered and, when accepted by the Corporation, will constitute a legal, valid, binding and enforceable obligation of the Subscriber; and

(s) in the case of a subscription by it for Units acting as agent for a Disclosed Beneficial Purchaser, it is duly authorized to execute and deliver this Subscription Agreement and all other necessary documentation in connection with such subscription on behalf of such Disclosed Beneficial Purchaser and this Subscription Agreement has been duly authorized, executed and delivered by or on behalf of, and constitutes a legal, valid, binding and enforceable obligation of, such Disclosed Beneficial Purchaser and the Subscriber acknowledges that the Corporation is required by law to disclose to certain principal regulatory authorities the identity of each Disclosed Beneficial Purchaser for whom the Subscriber may be acting; and

(t) it has such knowledge in financial and business affairs as to be capable of evaluating the merits and risks of its investment in the Offered Securities and is able to bear the economic risk of loss of its investments or, where it is not purchasing as principal, each Disclosed Beneficial Purchaser, is able to bear the economic risk of loss of its investment in the Offered Securities and it has had access to such information, if any, concerning the Corporation and the terms and conditions of the Offering as it considered necessary in connection with its investment decision; and

(u) it confirms that none of the Corporation or any of its respective directors, officers, employees or representatives have made any representations (oral or written) to the Subscriber:

  (i) that any person will resell or repurchase any of the Offered Securities;

  (ii) that any person will refund the purchase price of any of the Offered Securities; or

  (iii) as to the future price or value of any of the Offered Securities; and

(v) it acknowledges that the Corporation's counsel is acting as counsel to the Corporation and not as counsel to the Subscriber; and

(w) the Subscriber is relying solely upon this Subscription Agreement and publicly available information relating to the Corporation and, other than as stated herein, not upon any verbal or written representation as to fact or otherwise made by or on behalf of the Corporation; and

(x) it acknowledges that this Subscription Agreement is not enforceable by the Subscriber until the Subscription Agreement has been accepted by the Corporation; and

(y) it understands, acknowledges and is aware that Units are being offered for sale only on a "private placement" basis and that the sale of Units and delivery of the Common Shares and Warrants is conditional upon such sale being exempt from the requirements under applicable securities laws as to the filing of a prospectus or delivery of an offering memorandum or upon the issuance of such orders, consents or approvals as may be required to permit such sale without the filing of a prospectus or delivering an offering memorandum and, as a consequence: (i) it is restricted from using most of the civil remedies available under securities legislation; (ii) the common law may not provide it with an adequate remedy in the event that it suffers investment loss in connection with securities acquired in a private placement; (iii) it may not receive information that would otherwise be required to be provided to it under securities legislation; and (iv) the Corporation is relieved from certain obligations that would otherwise apply under securities legislation; and

(z) if required by applicable securities legislation, regulations, rules, policies or orders or by any securities commission, stock exchange or other regulatory authority, the Subscriber will execute, deliver, file and otherwise assist the Corporation in filing, such reports, undertakings and other documents with respect to the issue of the Common Shares and Warrants including, without limitation: (i) in the case of an "accredited investor" resident in one of the provinces or territories of Canada, a Representation Letter in the form attached as **Exhibit 1**, including **Appendix A** and, if applicable, the Accredited Investor Risk Acknowledgment Form in the form attached as **Appendix B**; (ii) if the Subscriber is purchasing under subparagraph 7(e)(iii) hereof as a "close personal friend" or "close business associate", the Questionnaire attached hereto in **Exhibit 2** and if the Subscriber is resident in or otherwise subject to the applicable securities laws of Saskatchewan, the Risk Acknowledgement Form attached as **Exhibit 3** to this Subscription Agreement; (iii) if the Subscriber is resident in or otherwise subject to the applicable securities laws of Ontario and is purchasing under subparagraph 7(e)(iii), **Exhibit 4** to this Subscription Agreement; (iv) if the Subscriber is purchaser under subparagraph 7(e)(v) as a U.S. Purchaser, the Certification of U.S. Purchaser in the form attached as **Exhibit 5** to this subscription Agreement and a Representation Letter in the form attached as **Exhibit 1**, including **Appendix A** and, if applicable, the Accredited Investor Risk Acknowledgment Form in the form attached as **Appendix B**; and

(aa) the Subscriber does not act jointly or in concert with another subscriber for Units for the purposes of the acquisition of the Offered Securities; and

(bb) the entering into of this Subscription Agreement and the completion of the transactions contemplated hereby do not and will not result in a violation of any of the terms or provisions of any law applicable to the Subscriber, or if the Subscriber is not a natural person, any of the Subscriber's constating documents, or any agreement to which the Subscriber is a party or by which it is bound; and

(cc) the delivery of this Subscription Agreement, the acceptance hereof by the Corporation and the issuance of the Common Shares and Warrants to the Subscriber complies or will comply with all applicable laws of the Subscriber's jurisdiction of residence and domicile and will not cause the Corporation or any of its officers or directors to become subject to or require any disclosure, prospectus or other reporting requirement; and

(dd) unless it is purchasing under Section 7(e)(iii)(I) hereof, the Subscriber is not a "control person" of the Corporation, as that term is defined in the *Securities Act* (British Columbia), will not become a "control person" of the Corporation by purchasing the number of Units subscribed for under this Subscription Agreement, and does not intend to act jointly or in concert with any other person to form a control group in respect of the Corporation; and

(ee) no authorization, consent, order, approval or notice of any federal, provincial, territorial, municipal or foreign regulatory body or official must be obtained or given, and no waiting period must expire, in order that this Subscription Agreement and the transactions contemplated herein can be consummated by the Subscriber; and

(ff) the Subscriber acknowledges that it has been encouraged to obtain independent legal, income tax and investment advice with respect to its subscription for these Units and accordingly, had the opportunity to acquire an understanding of the meanings of all terms contained herein relevant to the Subscriber for purposes of giving representations, warranties and covenants under this Subscription Agreement.

Representations, Warranties and Covenants of the Corporation

8. By accepting this Subscription Agreement, the Corporation represents, warrants and covenants to the Subscriber (and acknowledges that the Subscriber is relying thereon) both at the date hereof and at the Closing Time that:

(a) the Corporation has the full corporate right, power and authority to execute and deliver this Subscription Agreement and to issue the Offered Securities; and

(b) this Subscription Agreement, once accepted, constitutes a binding obligation of the Corporation enforceable in accordance with its terms; and

(c) the execution and delivery of, and the performance of the terms of, this Subscription Agreement by the Corporation, including the issuance of the Common Shares and Warrants, does not and will not constitute a breach of or default under the constating documents of the Corporation or any law, regulation, order or ruling applicable to the Corporation or any agreement, contract or indenture to which the Corporation is a party or by which it is bound.

Closing

9. The Subscriber agrees to deliver to the Corporation's Corporate Secretary at cmay@xortx.com not later than 4:00 p.m. (Calgary time) on February 24, 2020, or by such other time as is acceptable to the Corporation:

(a) this duly completed and executed Subscription Agreement;

(b) if the Subscriber is an "accredited investor", a fully executed and completed Representation Letter in the form attached as **Exhibit 1**, including **Appendix A** and, if applicable, the Accredited Investor Risk Acknowledgment Form in the form attached as **Appendix B**;

(c) if the Subscriber is purchasing under subparagraph 7(e)(iii) hereof as a "close personal friend" or "close business associate", the Questionnaire attached hereto in **Exhibit 2** and **if the Subscriber is resident in or otherwise subject to the applicable securities laws of Saskatchewan**, the Subscriber has concurrently executed the Risk Acknowledgement Form attached as **Exhibit 3** to this Subscription Agreement;

(d) if the Subscriber is resident in or otherwise subject to the applicable securities laws of Ontario and is purchasing under subparagraph 7(e)(iii), **Exhibit 4** to this Subscription Agreement;

(e) if the Subscriber is purchasing under subparagraph 7(e)(v), the Certification of U.S. Purchaser in the form attached as **Exhibit 5** to this subscription Agreement and a Representation Letter in the form attached as **Exhibit 1**, including **Appendix A** and, if applicable, the Accredited Investor Risk Acknowledgment Form in the form attached as **Appendix B**; and

(f) such other documents as may be required or requested of the Subscriber by the Corporation or its counsel as contemplated herein.

10. The Subscriber further agrees to deliver the Aggregate Subscription Price by way of wire transfer, certified cheque or bank draft payable to "**McCarthy Tétrault LLP, in trust**" for an amount equal to the Aggregate Subscription Price or payment of the same amount in such other manner as is acceptable to the Corporation not later than 4:00 p.m. (Calgary time) on February 24, 2020. If this Subscription Agreement is rejected in whole or in part, the Subscriber acknowledges that the unused portion of the Aggregate Subscription Price will be promptly returned to it without interest.

If sending by wire, please send as follows:

PRIMARY BANK **aka Final Destination bank**	**TRUST ACCOUNT**

If sending a certified cheque or bank draft, please send to:

McCarthy Tétrault LLP
Suite 4000, 421 – 7th Avenue S.W.
Calgary, Alberta T2P 4K9
Attention: Rick Pawluk

11. The closing of the Offering will be completed at the offices of McCarthy Tétrault LLP, the Corporation's counsel, at Suite 4000, 421 – 7th Avenue S.W., Calgary, Alberta. The closing will occur at 8:00 a.m. (Calgary time) or such other time agreed on by the Corporation (the "**Closing Time**") on February 28, 2020 or such other date or dates agreed on by the Corporation (the "**Closing Date**").

12. The Corporation shall be entitled to rely on delivery of a facsimile or electronically scanned (PDF) copy of executed subscriptions, and acceptance by the Corporation of such facsimile or electronically scanned subscriptions shall be legally effective to create a valid and binding agreement between the Subscriber and the Corporation in accordance with the terms hereof. Notwithstanding the foregoing, upon the request of the Corporation, the Subscriber shall deliver originally executed copies of the documents listed in Section 9 hereof to the Corporation within two business days of such request. In addition, this Subscription Agreement may be executed in counterparts, each of which shall be deemed to be an original and all of which shall constitute one and the same document.

General

13. The Subscriber agrees that the representations, warranties and covenants of the Subscriber herein will be true and correct both as of the execution of this Subscription Agreement and as of the Closing Time and will survive the completion of the issuance of the Common Shares and Warrants. The representations, warranties and covenants of the Subscriber herein are made with the intent that they be relied upon by the Corporation and its counsel in determining the eligibility of a purchaser of Units and the Subscriber agrees to indemnify the Corporation and its directors, officers, employees, advisors, affiliates, shareholders, partners and agents from and against any and all loss, liability, claim, damage and expense whatsoever including, but not limited to, any fees, costs and expenses whatsoever reasonably incurred in investigating, preparing or defending against any litigation, administrative proceeding or investigation commenced or threatened or any claim whatsoever arising out of or based upon any representation or warranty of the Subscriber contained herein or in any document furnished by the Subscriber to the Corporation in connection herewith being untrue in any material respect or any breach or failure by the Subscriber to comply with any covenant or agreement made by the Subscriber herein or in any document furnished by the Subscriber to the Corporation in connection herewith. The Subscriber undertakes to immediately notify the Corporation, c/o McCarthy Tétrault LLP, Suite 4000, 421 - 7th Avenue S.W., Calgary, Alberta T2P 4K9, Attention: Rick Pawluk (fax:) of any change in any statement or other information relating to the Subscriber set forth herein which takes place prior to the Closing Time.

14. The Subscriber, on its own behalf and, if applicable, on behalf of each Disclosed Beneficial Purchaser for whom it is contracting hereunder, acknowledges and consents to the fact that the Corporation is collecting its personal information (as that term is defined under applicable privacy legislation, including, without limitation, the *Personal Information Protection and Electronic Documents Act* (Canada) and any other applicable similar, replacement or supplemental provincial or federal legislation or laws in effect from time to time), or that of each Disclosed Beneficial Purchaser for whom it is contracting hereunder, for the purpose of completing the Offering, which includes, without limitation, determining the Subscriber's eligibility to purchase the Units under applicable securities laws, preparing and registering certificates representing the Offered Securities to be issued to the Subscriber and completing filings required by any stock exchange or securities regulatory authority. The Subscriber, on its own behalf and, if applicable, on behalf of each Disclosed Beneficial Purchaser for whom it is contracting hereunder, acknowledges and consents to the Corporation retaining such personal information for as long as permitted or required by law or business practices. The Subscriber, on its own behalf and, if applicable, on behalf of each Disclosed Beneficial Purchaser for whom it is contracting hereunder, further acknowledges and consents to the fact that the Corporation may be required by the securities laws of the applicable jurisdictions, the rules and policies of any securities commission, stock exchange or the rules of the Investment Dealers Association of Canada to provide regulatory authorities with any personal information provided by the Subscriber in this Subscription Agreement. The Subscriber represents and warrants, as applicable, that it has the authority to provide the consents and acknowledgements set out in this paragraph on behalf of each Disclosed Beneficial Purchaser for whom it is contracting hereunder. In addition to the foregoing, it agrees and acknowledge that the Corporation may use and disclose its personal information, or that of each Disclosed Beneficial Purchaser for whom it is contracting hereunder, as follows:

(a) for internal use with respect to managing the relationships between and contractual obligations of the Corporation and the Subscriber or any Disclosed Beneficial Purchaser for whom it is contracting hereunder;

(b) for use and disclosure for income tax related purposes, including without limitation, where required by law, disclosure to Canada Revenue Agency;

(c) disclosure to securities regulatory authorities and other regulatory bodies with jurisdiction with respect to reports of trades and similar regulatory filings;

(d) disclosure to a governmental or other authority to which the disclosure is required by court order or subpoena compelling such disclosure and where there is no reasonable alternative to such disclosure;

(e) disclosure to professional advisors of the Corporation in connection with the performance of their professional services;

(f) disclosure to any person where such disclosure is necessary for legitimate business reasons and is made with the Subscriber's prior written consent;

(g) disclosure to a court determining the rights of the parties under this Subscription Agreement; or

(h) for use and disclosure as otherwise required or permitted by law.

15. Furthermore, the Subscriber acknowledges and agrees that:

(a) information with respect to the Subscriber's full name, residential address (or head office) and telephone number, the number and type of securities received, the total value of such securities, the prospectus exemption relied upon by the Corporation and the date of distribution (collectively the "**Subscriber Information**") may be delivered to the securities regulatory authority or regulator in each Canadian jurisdiction in which the Subscriber resides, or in circumstances where a subscription for securities is otherwise subject to such a reporting requirement under applicable securities laws;

(b) the Subscriber Information is being collected indirectly by securities regulatory authority or regulator under the authority granted to it by applicable securities laws;

(c) the Subscriber Information is being collected for the purposes of the administration and enforcement of applicable securities laws;

(d) the Subscriber or any Disclosed Beneficial Purchaser for whom the Subscriber is contracting hereunder hereby authorizes the indirect collection of the Subscriber Information by the applicable securities regulatory authority or regulator in each Canadian jurisdiction;

(e) that the title, business address and business telephone number of the public official in each province of Canada who can answer questions about the securities regulatory authority or regulator's indirect collection of the Subscriber Information is set out in **Exhibit 5**;

(f) the Subscriber Information may become available to the public in accordance with the requirements of applicable securities laws and the Subscriber consents to the disclosure of such information; and

(g) while Subscriber Information in the report described above is currently not expected to be placed on the public file of any Canadian securities regulatory authority regulator, freedom of information legislation may require the securities regulatory authority or regulator to make this information available, if requested.

16. The Subscriber represents and warrants that the funds representing the Aggregate Subscription Price which will be advanced by the Subscriber to the Corporation hereunder will not represent proceeds of crime for the purposes of the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act*(Canada) (the "**PCMLTFA**") or the *Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act* of the United States (the "**Patriot Act**"), and the Subscriber acknowledges that the Corporation may in the future be required by law to disclose the Subscriber's name and other information relating to this Subscription Agreement and the Subscriber's subscription hereunder, on a confidential basis, pursuant to the PCMLTFA. To the best of its knowledge (a) none of the subscription funds to be provided by the Subscriber (i) have been or will be derived from or related to any activity that is deemed criminal under the law of Canada, the United States of America, or any other jurisdiction, or (ii) are being tendered on behalf of a person or entity who has not been identified to the Subscriber, and (b) it will promptly notify the Corporation if the Subscriber discovers that any of such representations ceases to be true, and to provide the Corporation with appropriate information in connection therewith.

17. The Subscriber acknowledges and agrees that all costs incurred by the Subscriber (including any fees and disbursements of any special counsel retained by the Subscriber) relating to the sale of the Units to the Subscriber shall be borne by the Subscriber.

18. The contract arising out of this Subscription Agreement and all documents relating thereto shall be governed by and construed in accordance with the laws of the Province of Alberta and the federal laws of Canada applicable therein. The parties irrevocably attorn to the exclusive jurisdiction of the courts of the Province of Alberta.

19. Time shall be of the essence hereof.

20. This Subscription Agreement represents the entire agreement of the parties hereto relating to the subject matter hereof and there are no representations, covenants or other agreements relating to the subject matter hereof except as stated or referred to herein.

21. The terms and provisions of this Subscription Agreement shall be binding upon and enure to the benefit of the Subscriber and the Corporation and their respective heirs, executors, administrators, successors and assigns; provided that, except for the assignment by a Subscriber who is acting as nominee or agent to the beneficial owner and as otherwise herein provided, this Subscription Agreement shall not be assignable by any party without prior written consent of the other parties.

22. The Subscriber, on its own behalf and, if applicable, on behalf of others for whom it is contracting hereunder, agrees that this subscription is made for valuable consideration and may not be withdrawn, cancelled, terminated or revoked by the Subscriber, on its own behalf and, if applicable, on behalf of others for whom it is contracting hereunder.

23. Neither this Subscription Agreement nor any provision hereof shall be waived, modified, changed, discharged or terminated except only by a written instrument signed by each party against whom the waiver, change, discharge or termination is sought.

24. The invalidity, illegality or unenforceability of any provision in this Subscription Agreement shall not affect the validity, legality or enforceability of any other provision hereof.

25. The Subscriber acknowledges and agrees that acceptance of this Subscription Agreement will be conditional, among other things, upon the sale of Units to the Subscriber being exempt from any prospectus and offering memorandum requirements of all applicable securities laws. The Corporation will be deemed to have accepted this Subscription Agreement upon the delivery at closing of the certificates representing the Common Shares and Warrants to or upon the direction of the Subscriber in accordance with the provisions hereof.

26. The headings used in this Subscription Agreement have been inserted for convenience of reference only and shall not affect the meaning or interpretation of this Subscription Agreement or any provision hereof.

27. The covenants, representations and warranties contained herein shall survive the closing of the transactions contemplated hereby.

28. In this Subscription Agreement (including attachments), references to "$" or "Cdn. $" are to Canadian dollars.

2 9. The Subscriber and each beneficial purchaser, if any, acknowledges its consent and requests that all documents evidencing or relating in any way to its purchase of Units be drawn up in the English language only. *Nous reconnaissons par les présentes avoir consenti et demandé que tous les documents faisant foi ou se rapportant de quelque manière à l'achat des securities soient rédigés en anglais seulement.*

In addition to completing the first page of this Subscription Agreement and the applicable sections of the Terms and Conditions, please also complete the attached exhibits, as applicable.

EXHIBIT 1
REPRESENTATION LETTER

(FOR ACCREDITED INVESTORS)

TO: XORTX THERAPEUTICS INC. (the "Corporation")

In connection with the agreement to purchase units of the Corporation ("**Units**"), each Unit comprised of one common share in the capital of the Corporation ("**Common Share**") and one half of one Common Share purchase warrant by the undersigned subscriber or, if applicable, the principal on whose behalf the undersigned is purchasing as agent (the "**Subscriber**" for the purposes of this Exhibit 1), hereby represents, warrants, covenants and certifies to the Corporation, both as at the date hereof and as of the Closing Time (as defined in the Subscription Agreement):

1. The Subscriber is resident in or is otherwise subject to the applicable securities laws of a jurisdiction of Canada;

2. The Subscriber is an "accredited investor", as such term is defined: (A) if the Subscriber is resident in or otherwise subject to the applicable securities laws of a province of Canada other than Ontario, in National Instrument 45-106 entitled "*Prospectus Exemptions*" ("**NI 45-106**") promulgated under applicable securities legislation in such jurisdictions; or (B) if the Subscriber is resident in or otherwise subject to the applicable securities laws of Ontario, in Section 73.3(1) of the *Securities Act* (Ontario), by virtue of satisfying the indicated criterion as set out in Appendix "A" to this Representation Letter.

3. The Subscriber fully understands the meaning of the terms and conditions of the category of "accredited investor" applicable to it, has had an opportunity to discuss the meaning of the category of "accredited investor" applicable to it with a representative of the Corporation, and confirms that it has reviewed and understands the definitions in Appendix "A" to this Representation Letter in respect of the category of "accredited investor" applicable to it and, in particular, if the Subscriber is an "accredited investor" by virtue of satisfying paragraph (j), (j.1), (k) or (l) of Appendix "A" to this Representation Letter, it has reviewed and understands the meaning and calculation of "financial assets", "related liabilities" and "net assets", as applicable, contained in Appendix "A" hereto;

4. The Subscriber was not created or used solely to purchase or hold securities as an accredited investor as described in paragraph (m) of the definition of "accredited investor" in NI 45-106;

5. If the Subscriber is relying on paragraphs (j), (k) or (l) of the definition of "accredited investor" in NI 45-106, the Subscriber has executed and delivered a Risk Acknowledgment Form set out in Appendix "B" to this Representation Letter which, upon execution, shall be incorporated into and form a part of the Subscription Agreement and the Corporation and its counsel shall be entitled to rely thereon; and

6. Upon execution of this Exhibit 1 by the Subscriber, this Exhibit 1 shall be incorporated into and form a part of the Subscription Agreement and the Corporation and its counsel shall be entitled to rely thereon.

Dated: _____.

IMPORTANT: PLEASE INITIAL THE APPLICABLE PROVISION IN APPENDIX A ON THE NEXT PAGES AND, IF APPLICABLE, COMPLETE APPENDIX B

_____
Print Name of Subscriber

By: _____
Signature

_____
Print Name of Signatory (if different from Subscriber)

_____
Title

APPENDIX "A" TO EXHIBIT 1

NOTE: THE INVESTOR MUST INITIAL OR OTHERWISE MARK BESIDE THE APPLICABLE PORTION OF THE DEFINITION BELOW.

Accredited Investor - (defined in National Instrument 45-106 or Section 73.3(1) of the *Securities Act* (Ontario)) means:

_____ (a) (i) except in Ontario, a Canadian financial institution, or a Schedule III bank, or (ii) in Ontario, a financial institution described in paragraph 1, 2 or 3 of subsection 73.1(1) of the *Securities Act* (Ontario); or

_____ (b) (i) except in Ontario, the Business Development Bank of Canada incorporated under the *Business Development Bank of Canada Act* (Canada), or (ii) in Ontario, the Business Development Bank of Canada; or

_____ (c) (i) except in Ontario, a subsidiary of any person referred to in paragraphs (a)(i) or (b)(i), if the person owns all of the voting securities of the subsidiary, except the voting securities required by law to be owned by directors of that subsidiary, or (ii) in Ontario, a subsidiary or any person or company referred to in paragraphs (a)(ii) or (b)(ii), if the person or company owns all of the voting securities of the subsidiary, except the voting securities required by law to be owned by directors of that subsidiary; or

_____ (d) (i) except in Ontario, a person registered under the securities legislation of a jurisdiction of Canada as an adviser or dealer, or (ii) in Ontario, a person or company registered under the securities legislation of a province or territory of Canada as an adviser or dealer, except as otherwise prescribed by the regulations in respect of the *Securities Act* (Ontario); or

_____ (e) an individual registered under the securities legislation of a jurisdiction of Canada as a representative of a person referred to in paragraph (d)(i); or

_____ (e.1) an individual formerly registered under the securities legislation of a jurisdiction of Canada, other than an individual formerly registered solely as a representative of a limited market dealer under one or both of the *Securities Act* (Ontario) or the *Securities Act* (Newfoundland and Labrador); or

_____ (f) (i) except in Ontario, the Government of Canada or a jurisdiction of Canada, or any crown corporation, agency or wholly-owned entity of the Government of Canada or a jurisdiction of Canada, or (ii) in Ontario, the Government of Canada, the government of a province or territory of Canada, or any Crown corporation, agency or wholly owned entity of the Government of Canada or of the government of a province or territory of Canada; or

_____ (g) (i) except in Ontario, a municipality, public board or commission in Canada and a metropolitan community, school board, the Comité de gestion de la taxe scolaire de l'île de Montréal or an intermunicipal management board in Québec, or (ii) in Ontario, a municipality, public board or commission in Canada and a metropolitan community, school board, the Comité de gestion de la taxe scolaire de l'Île de Montréal or an intermunicipal management board in Quebec; or

_____ (h) (i) except in Ontario, any national, federal, state, provincial, territorial or municipal government of or in any foreign jurisdiction, or any agency of that government, or (ii) in Ontario, any national, federal, state, provincial, territorial or municipal government of or in any foreign jurisdiction, or any agency of that government; or

_____ (i) (i) except in Ontario, a pension fund that is regulated by either the Office of the Superintendent of Financial Institutions (Canada), a pension commission or similar regulatory authority of a jurisdiction of Canada, or (ii) in Ontario, a pension fund that is regulated by either the Office of the Superintendent of Financial Institutions (Canada) or a pension commission or similar regulatory authority of a province or territory of Canada; or

_____ (j) an individual who, either alone or with a spouse, beneficially owns **financial assets** having an aggregate realizable value that before taxes, but net of any related liabilities, exceeds $1,000,000; or

(Note: Financial assets include cash and securities, but do not include a personal residence – see the definition of "financial assets" below. Financial assets are generally liquid or relatively easy to liquidate. You must subtract any liabilities related to your financial assets to calculate your net financial assets—see the definition of "related liabilities" below. In the case where financial assets are held in a trust or in another type of investment vehicle for the benefit of an individual there may be questions as to whether the individual beneficially owns the financial assets. The following factors are indicative of beneficial ownership of financial assets: (i) physical or constructive possession of evidence of ownership of the financial asset; (ii) entitlement to receipt of any income generated by the financial asset; (iii) risk of loss of the value of the financial asset; and (iv) the ability to dispose of the financial asset or otherwise deal with it as you see fit. For example, securities held in a self-directed RRSP, for your sole benefit, are beneficially owned by you. In general, financial assets in a spousal RRSP would also be included for the purposes of the financial assets test in this paragraph (j); however, financial assets held in a group RRSP under which you do not have the ability to acquire the financial assets and deal with them directly are not considered to be beneficially owned by you. If you meet the higher financial asset threshold set out in paragraph (j.1) as an individual exclusive of your spouse, then initial paragraph (j.1) instead of this paragraph (j).)

Please provide the following information to the best of your knowledge based on the most recent information available to you:

Aggregate realizable value of financial assets before taxes $ _____

Related liabilities $ _____

(Note: If the Subscriber is relying on this category of Accredited Investor to purchase the Units, the Subscriber must also complete in duplicate Appendix "B" to this Representation Letter.)

_____ (j.1) an individual who beneficially owns **financial assets** having an aggregate realizable value that, before taxes but net of any related liabilities, exceeds $5,000,000; or

(Note: See the definition of "financial assets" below and the guidance in paragraph (j) above. The financial assets of your spouse (including financial assets in a spousal RRSP) cannot be included in the calculation of net financial assets under this paragraph (j.1).)

Please provide the following information to the best of your knowledge based on the most recent information available to you:

Aggregate realizable value of financial assets before taxes $ _____

Related liabilities $ _____

_____ (k) an individual whose net income before taxes exceeded $200,000 in each of the two most recent calendar years or whose net income before taxes combined with that of a spouse exceeded $300,000 in each of the two most recent calendar years and who, in either case, reasonably expects to exceed that net income level in the current calendar year; or

Please provide the following information (based on your two most recent notices of assessment from the Canada Revenue Agency or equivalent):

Net income before taxes	Last year Range – Less than $100,000 ☐ Range – $100,000 to $200,000 ☐ Range – $201,000 to $300,000 ☐ Range – $301,000 to $400,000 ☐ Range – Greater than $401,000 ☐	State Amount: $ _____
	Year prior to last Range – Less than $100,000 ☐ Range – $100,000 to $200,000 ☐ Range – $201,000 to $300,000 ☐ Range – $301,000 to $400,000 ☐ Range – Greater than $401,000 ☐	State Amount: $ _____
If applicable, net income before taxes of your spouse	Last year Range – Less than $100,000 ☐ Range – $100,000 to $200,000 ☐ Range – $201,000 to $300,000 ☐ Range – $301,000 to $400,000 ☐ Range – Greater than $401,000 ☐	State Amount: $ _____
	Year prior to last Range – Less than $100,000 ☐ Range – $100,000 to $200,000 ☐ Range – $201,000 to $300,000 ☐ Range – $301,000 to $400,000 ☐ Range – Greater than $401,000 ☐	State Amount: $ _____

(Note: If the Subscriber is relying on this category of Accredited Investor to purchase the Units, the Subscriber must also complete in duplicate Appendix "B" to this Representation Letter.)

_____ (l) an individual who, either alone or with a spouse, has **net assets** of at least $5,000,000; or

(Note: To calculate net assets, take the value of your total assets (which may include a personal residence) and subtract your total liabilities (which may include a mortgage or equity line of credit). The value attributed to assets should reasonably reflect their estimated fair value. Income tax should be considered a liability if the obligation to pay it is outstanding at the Closing Date.)

Please provide the following information by subtracting your total liabilities from your total assets:

Total Assets	$ _____
Minus, Total Liabilities (including outstanding taxes)	- $ _____
Equals, Net Assets	= $ _____

(Note: If the Subscriber is relying on this category of Accredited Investor to purchase the Units, the Subscriber must also complete in duplicate Appendix "B" to this Representation Letter.)

(Note: if individual accredited investors wish to purchase through wholly-owned holding companies or similar entities, such purchasing entities must qualify under paragraphs (t) or (w) below, which must be initialed and the applicable information provided.)

_____ (m) a person, other than an individual or investment fund, that has net assets of at least $5,000,000 as shown on its most recently prepared financial statements; or

_____ (n) an investment fund that distributes or has distributed its securities only to:

(i) a person that is or was an accredited investor at the time of the distribution, or

(ii) a person that acquires or acquired securities in the circumstances referred to in sections 2.10 or 2.19 of National Instrument 45-106, or

(iii) a person described in paragraph (i) or (ii) that acquires or acquired securities under section 2.18 of National Instrument 45-106; or

_____ (o) an investment fund that distributes or has distributed securities under a prospectus in a jurisdiction of Canada for which the regulator or, in Québec, the securities regulatory authority, has issued a receipt; or

_____ (p) a trust company or trust corporation registered or authorized to carry on business under the *Trust and Loan Companies Act* (Canada) or under comparable legislation in a jurisdiction of Canada or a foreign jurisdiction, acting on behalf of a fully managed account managed by the trust company or trust corporation, as the case may be; or

_____ (q) a person acting on behalf of a fully managed account managed by that person, if that person is registered or authorized to carry on business as an adviser or the equivalent under the securities legislation of a jurisdiction of Canada or a foreign jurisdiction; or

_____ (r) a registered charity under the *Income Tax Act* (Canada) that, in regard to the trade, has obtained advice from an eligibility adviser or an adviser registered under the securities legislation of the jurisdiction of the registered charity to give advice on the securities being traded; or

_____ (s) an entity organized in a foreign jurisdiction that is analogous to any of the entities referred to in paragraphs (a) to (d) or paragraph (i) in form and function; or

_____ (t) a person in respect of which all of the owners of interests, direct, indirect or beneficial, except the voting securities required by law to be owned by directors, are persons that are accredited investors (as defined in National Instrument 45-106); or

If you initialed (t), then indicate the name and category of accredited investor (by reference to the applicable letter above) of each of the owners of interests (attach additional pages if more than three):

Name	Category of Accredited Investor

_____ (u) an investment fund that is advised by a person registered as an adviser or a person that is exempt from registration as an adviser; or

_____ (v) (i) a person that is recognized or designated by the securities regulatory authority or, except in Ontario and Québec, the regulator as an accredited investor, or (ii) in Ontario, a person or company that is recognized or designated by the Ontario Securities Commission as an accredited investor; or

_____ (w) a trust established by an accredited investor for the benefit of the accredited investor's family members of which a majority of the trustees are accredited investors and all of the beneficiaries are the accredited investor's spouse, a former spouse of the accredited investor or a parent, grandparent, brother, sister, child or grandchild of that accredited investor, of that accredited investor's spouse or of that accredited investor's former spouse.

Note: If you initialed (w), then indicate the name and category of accredited investor (by reference to the applicable letter above) of each of the following (attach additional pages if more than three trustees):

	Name	Category of Accredited Investor
Individual who established trust:		
Trustee		
Trustee		
Trustee		

For the purposes hereof:

(a) "**bank**" means a bank named in Schedule I or II of the *Bank Act* (Canada);

(b) "**Canadian financial institution**" means

(i) an association governed by the Cooperative Credit Associations Act (Canada) or a central cooperative credit society for which an order has been made under section 473(1) of that Act, or

(ii) a bank, loan corporation, trust company, trust corporation, insurance company, treasury branch, credit union, caisse populaire, financial services cooperative, or league that, in each case, is authorized by an enactment of Canada or a jurisdiction of Canada to carry on business in Canada or a jurisdiction of Canada;

(x) "**consultant**" means, for an issuer, a person, other than an employee, executive officer, or director of the issuer or of a related entity of the issuer, that:

(i) is engaged to provide services to the issuer or a related entity of the issuer, other than services provided in relation to a distribution,

(ii) provides the services under a written contract with the issuer or a related entity of the issuer, and

(iii) spends or will spend a significant amount of time and attention on the affairs and business of the issuer or a related entity of the issuer,

and includes

(iv) for an individual consultant, a corporation of which the individual consultant is an employee or shareholder, and a partnership of which the individual consultant is an employee or partner, and

(v) for a consultant that is not an individual, an employee, executive officer, or director of the consultant, provided that the individual employee, executive officer, or director spends or will spend a significant amount of time and attention on the affairs and business of the issuer or a related entity of the issuer;

(c) "**control person**" has the same meaning as in securities legislation and generally means any person that holds or is one of a combination of persons that holds:

(i) a sufficient number of the voting rights attached to all outstanding voting securities of an issuer to affect materially the control of the issuer, and

(ii) if a person holds more than 20% of the outstanding voting rights attached to all outstanding voting securities of an issuer, the person is deemed, in the absence of evidence to the contrary, to hold a sufficient number of the voting rights to affect materially the control of the issuer;

(d) "**director**" means:

(i) a member of the board of directors of a company or an individual who performs similar functions for a company, and

(ii) with respect to a person that is not a company, an individual who performs functions similar to those of a director of a company;

(e) "**eligibility adviser**" means:

(i) a person that is registered as an investment dealer and authorized to give advice with respect to the type of security being distributed, and

(ii) in Saskatchewan or Manitoba, also means a lawyer who is a practicing member in good standing with a law society of a jurisdiction of Canada or a public accountant who is a member in good standing of an institute or association of chartered accountants, certified general accountants or certified management accountants in a jurisdiction of Canada provided that the lawyer or public accountant must not

(iii) have a professional, business or personal relationship with the issuer, or any of its directors, executive officers, founders, or control persons, and

(iv) have acted for or been retained personally or otherwise as an employee, executive officer, director, associate or partner of a person that has acted for or been retained by the issuer or any of its directors, executive officers, founders or control persons within the previous 12 months;

(f) "**executive officer**" means, for an issuer, an individual who is

(i) a chair, vice-chair or president,

(ii) a vice-president in charge of a principal business unit, division or function including sales, finance or production, or

(iii) performing a policy-making function in respect of the issuer;

(g) "**financial assets**" means

(i) cash,

(ii) securities, or

(iii) a contract of insurance, a deposit or an evidence of a deposit that is not a security for the purposes of securities legislation;

(h) "**foreign jurisdiction**" means a country other than Canada or a political subdivision of a country other than Canada;

(i) "**founder**" means, in respect of an issuer, a person who,

(i) acting alone, in conjunction, or in concert with one or more persons, directly or indirectly, takes the initiative in founding, organizing or substantially reorganizing the business of the issuer, and

(ii) at the time of the distribution or trade is actively involved in the business of the issuer;

(j) "**fully managed account**" means an account of a client for which a person makes the investment decisions if that person has full discretion to trade in securities for the account without requiring the client's express consent to a transaction;

(k) "**individual**" means a natural person, but does not include:

(i) a partnership, unincorporated association, unincorporated syndicate, unincorporated organization or trust, or

(ii) a natural person in the person's capacity as trustee, executor, administrator or other legal representative;

(l) "**insider**" means:

(i) a director or an officer of an issuer,

(ii) a director or an officer of a person that is itself an insider or a subsidiary of an issuer,

(iii) a person that has:

(A) beneficial ownership of, or control or direction over, directly or indirectly, or

(B) a combination of beneficial ownership of, and control or direction over, directly or indirectly, securities of an issuer carrying more than 10% of the voting rights attached to all the issuer's outstanding voting securities, excluding, for the purpose of the calculation of the percentage held, any securities held by the person as underwriter in the course of a distribution,

(iv) an issuer that has purchased, redeemed or otherwise acquired a security of its own issue, for long as it continues to hold that security,

(v) a person designated as an insider in an order made under section 3.2, or

(vi) person that is in a prescribed class of persons;

(m) **"investment fund**" has the same meaning as in National Instrument 81-106 *Investment Fund Continuous Disclosure;*

(n) "**jurisdiction**" means a province or territory of Canada except when used in the term foreign jurisdiction;

(o) "**local jurisdiction**" means the jurisdiction in which the Canadian securities regulatory authority is situate;

(p) "**permitted assign**" means, for a person that is an employee, executive officer, director or consultant of an issuer or of a related entity of the issuer,

(i) a trustee, custodian, or administrator acting on behalf of, or for the benefit of the person,

(ii) a holding entity for the person,

(iii) a RRSP, RRIF, or TFSA of the person,

(iv) a spouse of the person,

(v) a trustee, custodian, or administrator acting on behalf of, or for the benefit of the spouse of the person,

(vi) a holding entity of the spouse of the person,

(vii) a RRSP, RRIP or TFSA of the spouse of the person;

(q) "**person**" includes

(i) an individual,

(ii) a corporation,

(iii) a partnership, trust, fund and an association, syndicate, organization or other organized group of persons, whether incorporated or not, and

(iv) an individual or other person in that person's capacity as a trustee, executor, administrator or personal or other legal representative;

(r) "**registrant**" means a person registered or required to be registered under the applicable securities laws;

(s) "**regulator**" means, for the local jurisdiction, the Executive Director as defined under securities legislation of the local jurisdiction;

(t) "**related entity**" means, for an issuer, a person that controls or is controlled by the issuer or that is controlled by the same person that controls the issuer;

(u) "**related liabilities**" means

(i) liabilities incurred or assumed for the purpose of financing the acquisition or ownership of financial assets, or

(ii) liabilities that are secured by financial assets.

(v) "**Schedule III bank**" means an authorized foreign bank named in Schedule III of the *Bank Act* (Canada);

(w) "**spouse**" means, an individual who,

(i) is married to another individual and is not living separate and apart within the meaning of the Divorce Act (Canada), from the other individual,

(ii) is living with another individual in a marriage-like relationship, including a marriage-like relationship between individuals of the same gender, or

(iii) in Alberta, is an individual referred to in paragraph (i) or (ii) above, or is an adult interdependent partner within the meaning of the *Adult Interdependent Relationships Act* (Alberta); and

(x) "**subsidiary**" means an issuer that is controlled directly or indirectly by another issuer and includes a subsidiary of that subsidiary.

Affiliated Entities, Control and Subsidiaries

1. A person or company is considered to be an affiliated entity of another person or company if one is a subsidiary entity of the other, or if both are subsidiary entities of the same person or company, or if each of them is controlled by the same person or company.

2. A person or company is considered to be controlled by a person or company if

(a) in the case of a person or company,

(i) voting securities of the first mentioned person or company carrying more than 50% of the votes for the election of directors are held, otherwise than by way of security only, by or for the benefit of, the other person or company, and

(ii) the votes carried by the securities are entitled, if exercise, to elect a majority of the directors of the first mentioned person or company.

(b) in the case of a partnership that does not have directors, other than a limited partnership, the second mentioned person or company holds more than 50% of the interests in the partnership; or

(c) in the case of a limited partnership, the general partner is the second mentioned person or company.

3. A person or company is considered to be a subsidiary entity of another person or company if

(a) it is controlled by,

(iii) that other; or

(iv) that other and one or more persons or companies, each of which is controlled by that other; or

(v) two or more persons or companies, each of which is controlled by that other; or

(vi) it is a subsidiary entity of a person or company that is the other's subsidiary entity.

APPENDIX "B" TO EXHIBIT 1

RISK ACKNOWLEDGEMENT FORM FOR CERTAIN INDIVIDUAL ACCREDITED INVESTORS

To be completed by individuals investing under categories (j), (k) or (l) of the definition of "accredited investor" in National Instrument 45-106 – Prospectus Exemptions, which are reproduced in Appendix "A" to Exhibit 1 as paragraphs (j), (k) or (l), as applicable. Note that individuals investing under category (j.1) of the definition of "accredited investor" in National Instrument 45-106 – Prospectus Exemptions do not need to complete this form.

WARNING!

This investment is risky. Don't invest unless you can afford to lose all the money you pay for this investment.

SECTION 1 TO BE COMPLETED BY THE ISSUER OR SELLING SECURITY HOLDER	
1. About your investment	
Type of securities: Units, each comprised of one Common Share and one Warrant	Issuer:
Purchased from the Issuer	
SECTIONS 2 TO 4 TO BE COMPLETED BY THE PURCHASER	
2. Risk acknowledgement	
This investment is risky. Initial that you understand that:	**Your initials**
Risk of loss – You could lose your entire investment of $_____. [*Instruction: Insert the dollar amount of the investment.]*	
Liquidity risk – You may not be able to sell your investment quickly – or at all.	
Lack of information – You may receive little or no information about your investment.	
Lack of advice – You will not receive advice from the salesperson about whether this investment is suitable for you unless the salesperson is registered. The salesperson is the person who meets with, or provides information to, you about making this investment. To check whether the salesperson is registered, go to **www.aretheyregistered.ca**.	
3. Accredited investor status	
You must meet at least **one** of the following criteria to be able to make this investment. Initial the statement that applies to you. (You may initial more than one statement.) The person identified in section 6 is responsible for ensuring that you meet the definition of accredited investor. That person, or the salesperson identified in section 5, can help you if you have questions about whether you meet these criteria.	**Your initials**
· Your net income before taxes was more than $200,000 in each of the two most recent calendar years, and · you expect it to be more than $200,000 in the current calendar year. (You can find your net income before taxes on your personal income tax return.)	

· Your net income before taxes combined with your spouse's was more than $300,000 in each of the two most recent calendar years, and you expect your combined net income before taxes to be more than $300,000 in the current calendar year.	
· Either alone or with your spouse, you own more than $1 million in cash and securities, after subtracting any debt related to the cash and securities.	
· Either alone or with your spouse, you have net assets worth more than $5 million. (Your net assets are your total assets (including real estate) minus your	

Your name and signature	
By signing this form, you confirm that you have read this form and you understand the risks of making this investment as identified in this form.	
First and last name (please print)**:**	
Signature:	Date:
SECTION 5 TO BE COMPLETED BY THE SALESPERSON	
Salesperson information	
[Instruction: The salesperson is the person who meets with, or provides information to, the purchaser with respect to making this investment. That could include a representative of the issuer or selling security holder, a registrant or a person who is exempt from the registration requirement.]	
First and last name of salesperson (please print):	
Telephone:	Email:
Name of firm (if registered):	Dealer Rep. Code:
SECTION 6 TO BE COMPLETED BY THE ISSUER OR SELLING SECURITY HOLDER	
For more information about this investment	
Allen Davidoff 403 455 7727 or adavidoff@xortx.com **For more information about prospectus exemptions, contact your local contact information at www.securities-administrators.ca.**	

Form instructions:

1. *The information in sections 1, 5 and 6 must be completed before the purchaser completes and signs the form.*

2. *The purchaser must sign this form. Each of the purchaser and the issuer must receive a copy of this form signed by the purchaser. The issuer is required to keep a copy of this form for 8 years after the distribution.*

EXHIBIT 2

CLOSE PERSONAL FRIEND/CLOSE BUSINESS ASSOCIATE QUESTIONNAIRE

To be completed by Subscribers to whom section 7(e)(iii)(IV), (V), (VI), (VIII) or (IX) of the Subscription Agreement applies.

Name of director, executive officer, control person or founder of whom Subscriber is a close personal friend/close business associate

Length of relationship

Details of relationship or prior business dealings

The undersigned understands that the Corporation is relying on this information in determining to sell securities to the undersigned in a manner exempt from the registration and prospectus requirements of applicable securities laws.

Date: _____.

Print name of Subscriber

By: _____
Signature

Print name of Signatory (if different from Subscriber)

Title

MEANING OF "CLOSE PERSONAL FRIEND" AND "CLOSE BUSINESS ASSOCIATE" AS DESCRIBED IN COMPANION POLICY 45-106CP TO NATIONAL INSTRUMENT 45-106 PROSPECTUS EXEMPTIONS

Meaning of "close personal friend"

A "close personal friend" of a director, executive officer, founder or control person of an issuer is an individual who knows the director, executive officer, founder or control person well enough and has known them for a sufficient period of time to be in a position to assess their capabilities and trustworthiness and to obtain information from them with respect to the investment. The term "close personal friend" can include a family member who is not already specifically identified in the exemptions if the family member satisfies the criteria described above.

The following factors are relevant in determining whether a relationship is that of a close personal friend:

(a) the length of time the individual has known the director, executive officer, founder or control person,

(b) the nature of the relationship between the individual and the director, executive officer, founder or control person including such matters as the frequency of contacts between them and the level of trust and reliance in the other circumstances, and

(c) the number of "close personal friends" of the director, executive officer, found or control person to whom securities have been distributed in reliance on the private issuer exemption or the family, friends and business associates exemption.

An individual is not a close personal friend solely because the individual is:

(a) a relative,

(b) a member of the same organization, association or religious group,

(c) a co-worker, colleague or associate at the same workplace,

(d) a client, customer, former client or former customer,

(e) a mere acquaintance, or

(f) connected through some form of social media, such as Facebook, Twitter or LinkedIn.

The relationship between the individual and the director, executive officer, founder or control person must be direct. For example, the exemption is not available to a close personal friend of a close personal friend of a director of the issuer.

A relationship that is primarily founded on participation in an Internet forum is not considered to be a relationship of a close personal friend.

Meaning of "close business associate"

A "close business associate" is an individual who has had sufficient prior business dealings with a director, executive officer, founder or control person of the issuer to be in a position to assess their capabilities and trustworthiness and to obtain information from them with respect to the investment.

The following factors are relevant in determining whether a relationship is that of a close business associate:

(a) the length of time the individual has known the director, executive officer, founder or control person,

(b) the nature of any specific business relationships between the individual and the director, executive officer, founder or control person, including, for each relationship, when it began, the frequency of contact between them and when it terminated if it is not ongoing, and the level of trust and reliance in the other circumstances,

(c) the nature and number of any business dealings between the individual and the director, executive officer, found or control person, the length of the period during which they occurred, and the nature and date of the most recent business dealing, and

(d) the number of "close business associates" of the director, executive officer, found or control person to whom securities have been distributed in reliance on the private issuer exemption or the family, friends and business associates exemption.

An individual is not a close business associate solely because the individual is:

(a) a member of the same club, organization, association or religious group,

(b) a co-worker, colleague or associate at the same workplace,

(c) a client, customer, former client or former customer,

(d) a mere acquaintance, or

(e) connected through some form of social media, such as Facebook, Twitter or LinkedIn.

The relationship between the individual and the director, executive officer, founder or control person must be direct. For example, the exemption is not available for a close business associate of a close business associate of a director of the issuer.

A relationship that is primarily founded on participation in an Internet forum is not considered to be a relationship of a close business associate.

EXHIBIT 3

RISK ACKNOWLEDGEMENT FORM

(Saskatchewan Close Friends and Close Business Associates Only)

WARNING

Risk Acknowledgement
Saskatchewan Close Personal Friends and Close Business Associates

I acknowledge that this is a risky investment:

- I am investing entirely at my own risk.
- No securities regulatory authority has evaluated or endorsed the merits of these securities.
- The person selling me these securities is not registered with a securities regulatory authority and has no duty to tell me whether this investment is suitable for me.
- I will not be able to sell these securities for 4 months.
- I could lose all the money I invest.
- I do not have a two-day right to cancel my purchase of these securities or the statutory rights of action for misrepresentation I would have if I were purchasing the securities under a prospectus. I do have a two-day right to cancel my purchase of these securities if I received an amended offering document.

I am investing $ _____ [total consideration] in total; this includes any amount I am obliged to pay in future.

I am a **close** personal friend or **close** business associate of_____ [state name], who is a _____ [state title - founder, director, executive officer or control person] of _____ [state name of issuer or its affiliate – if an affiliate state "an affiliate of the issuer" and give the issuer's name].

I acknowledge that I am purchasing based on my close relationship with ___ _____ [state name of founder, director, executive officer or control person] of _____[state name of issuer or its affiliate – if an affiliate state "an affiliate of the issuer" and give the issuer's name] whom I know well enough and for a sufficient period of time to be able to assess her/his capabilities and trustworthiness.

I acknowledge that this is a risky investment and that I could lose all the money I invest.

_____ _____
Date Signature of Purchaser

_____
Print name of Purchaser

Sign two copies of this document. Keep one copy for your records.

You are buying Exempt Market Securities

They are called *exempt market securities* because two parts of securities law do not apply to them. If an issuer wants to sell exempt market securities to you:

- the issuer does not have to give you a prospectus (a document that describes the investment in detail and gives you some legal protections), and
- the securities do not have to be sold by an investment dealer registered with a securities regulatory authority or regulator.

There are restrictions on your ability to resell exempt market securities. Exempt market securities are more risky than other securities.

You may not receive any written information about the issuer or its business

If you have any questions about the issuer or its business, ask for written clarification before you purchase the securities. You should consult your own professional advisers before investing in the securities.

You will not receive advice

Unless you consult your own professional advisors, you will not get professional advice about whether the investment is suitable for you.

EXHIBIT 4

RISK ACKNOWLEDGEMENT FORM FOR ONTARIO FAMILY, FRIENDS AND BUSINESS ASSOCIATES

WARNING! **This investment is risky. Don't invest unless you can afford to lose all the money you pay for this investment**

SECTION 1 TO BE COMPLETED BY THE ISSUER	
1. **About your investment**	
Type of securities: Units, each comprised of one Common Share and one Warrant	Issuer: XORTX Therapeutics Inc.
Purchased from the Issuer	
SECTION 2 TO 4 TO BE COMPLETED BY THE PURCHASER	
2. **Risk acknowledgement *[Instruction: initial all boxes in Section 2]***	
This investment is risky. *Initial that you understand that:*	**Your initials**
Risk of loss – You could lose your entire investment of $ _____ *[Instruction: Insert the total dollar amount of the investment.]*	
Liquidity risk – You may not be able to sell your investment quickly – or at all.	
Lack of information – You may receive little or no information about your investment.	
Lack of advice – You will not receive advice from the salesperson about whether this investment is suitable for you unless the salesperson is registered. The salesperson is the person who meets with, or provides information to, you about making this investment. To check whether the salesperson is registered, go to www.aretheyregistered.ca.	
3. **Family, friend or business associate status*[Instruction: initial one or more boxes that apply]***	
You must meet at least one of the following criteria to be able to make this investment. Initial the statement that applies to you.	**Your initials**
A. You are: 4. 1. *[check all applicable boxes]* ☐ a director of the issuer or an affiliate of the issuer ☐ an executive officer of the issuer or an affiliate of the issuer ☐ a control person of the issuer or an affiliate of the issuer ☐ a founder of the issuer 5. OR	

2. *[check all applicable boxes]* ☐ a person of which a majority of the voting securities are beneficially owned by, or a majority of the directors are, (i) individuals listed in (1) above and/or (ii) family members, close personal friends or close business associates of individuals listed in (1) above ☐ a trust or estate of which all of the beneficiaries or a majority of the trustees or executors are (i) individuals listed in (1) above and/or (ii) family members, close personal friends or close business associates of individuals listed in (1) above	
A. You are a family member of _____ *[Instruction: Insert the name of the person who is your relative either directly or through his or her spouse]*, who holds the following position affiliate of the issuer: _____. You are the _____ of that person or that person's spouse. *[Instruction: To qualify for this investment, the person listed above must be (a) your spouse or (b) your or your spouse's parent, grandparent, brother, sister, child or grandchild.]*	
B. You are a close personal friend of _____ *[Instruction: Insert the name of your close personal friend]*, who holds the following position at the issuer or an affiliate of the issuer: _____. You have known that person for _____ years.	
C. You are a close business associate of _____ *[Instruction: Insert the name of your close business associate]*, who holds the following position at the issuer or an affiliate of the issuer: _____. You have known that person for _____ years.	

6. **Your name and signature**	
By signing this form, you confirm that you have read this form and you understand the risks of making this investment as identified in this form. You also confirm that you are eligible to make this investment because you are a family member, close personal friend or close business associate of the person identified in section 5 of this form.	
First and last name (please print):	
Signature:	Date:
SECTION 5 TO BE COMPLETED BY PERSON WHO CLAIMS THE CLOSE PERSONAL RELATIONSHIP, IF APPLICABLE	

7. **Contact person at the issuer or an affiliate of the issuer**	
[Instruction: To be completed by the director, executive officer, control person or founder with whom the purchaser has a close personal relationship indicated under sections 3B, C or D of this form.]	
By signing this form, you confirm that you have, or your spouse has, the following relationship with the purchaser: [check the box that applies] ☐ family relationship as set out in section 3B of this form ☐ close personal friendship as set out in section 3C of this form ☐ close business associate relationship as set out in section 3D of this form	
First and last name of contact person (please print):	
Position with the issuer or affiliate of the issuer (director, executive officer, control person or founder):	
Telephone:	Email:
Signature:	Date:
SECTION 6 TO BE COMPLETED BY THE ISSUER	
8. **For more information about this investment**	
Allen Davidoff 403 455 7727 or adavidoff@xortx.com	
For more information about prospectus exemptions, contact your local securities regulator. You can find contact information at www.securities-administrators.ca.	
Signature of executive officer of the issuer (other than the purchaser):	Date:

Form instructions:

1. *The information in sections 1, 5 and 6 must be completed before the purchaser completes and signs the form.*

2. *The purchaser, an executive officer who is not the purchaser and, if applicable, the person who claims the close personal relationship to the purchaser must sign this form. Each of the purchaser, contact person at the issuer and the issuer must receive a copy of this form signed by the purchaser. The issuer is required to keep a copy of this form for 8 years after the distribution.*

3. *The detailed relationships required to purchase securities under this exemption are set out in section 2.5 of National Instrument 45-106 Prospectus Exemptions. For guidance on the meaning of "close personal friend" and "close business associate", please refer to sections 2.7 and 2.8, respectively, of Companion Policy 45-106CP Prospectus Exemptions.*

For the purposes of a Subscriber resident in or otherwise subject to applicable securities laws of Ontario relying on paragraph 7(e)(iii) of the Subscription Agreement to which this Exhibit 4 is attached, then this Exhibit must be signed by all of the following:

(i) the Subscriber; and

(ii) an executive officer of the Corporation other than the Subscriber; and

(iii) if the Subscriber is a person referred to under paragraph 7(e)(iii)(II), the director, executive officer or control person of the Corporation or an affiliate of the Corporation who has the specified relationship with the Subscriber; or

(iv) if the Subscriber is a person referred to under paragraph 7(e)(iii)(III), the director, executive officer or control person of the Corporation or an affiliate of the Corporation whose spouse has the specified relationship with the Subscriber; or

(v) if the Subscriber is a person referred to under paragraph 7(e)(iii)(IV) or 7(e)(iii)(V), the director, executive officer or control person of the Corporation or an affiliate of the Corporation who is a close personal friend or a close business associate of the Subscriber; or

(vi) the founder of the Corporation, if the Subscriber is a person referred to in paragraph 7(e)(iii)(VI) or 7(e)(iii)(VII)other than the founder of the Corporation

EXHIBIT 5

CERTIFICATION OF U.S. PURCHASER

TO: XORTX THERAPEUTICS INC. (the "Corporation")

(Capitalized terms not specifically defined in this Exhibit have the meaning ascribed to them in the Subscription Agreement to which this Exhibit is attached.)

In connection with the execution of the Subscription Agreement to which this Exhibit is attached, the undersigned (the "Purchaser") represents, warrants, covenants, agrees and certifies (which representations, warranties, covenants, agreements and certifications shall survive the Closing) to the Corporation, the Agents, the US Affiliates and their respective counsel (and acknowledges that the Corporation, the Agents, the US Affiliates and their respective counsel are relying thereon) that:

(a) The Purchaser understands and agrees that the Offered Securities have not been and will not be registered under the U.S. Securities Act, or applicable state securities laws, and the Offered Securities are being offered and sold by the Corporation in reliance upon the exemption from the registration requirement of the U.S. Securities Act provided by Section 4(a)(2) of the U.S. Securities Act and/or Rule 506(b) thereunder and similar exemptions under applicable state securities laws.

(b) The Purchaser, and if applicable, each person for whose account the Purchaser is purchasing and acquiring the Offered Securities, is an accredited investor ("Accredited Investor") that satisfies one or more of the categories of "accredited investor" in Rule 501(a) of Regulation D under the U.S. Securities Act ("Regulation D") indicated below (**the Purchaser must initial the appropriate line(s) applicable to it, and insert "BP" on the appropriate line applicable to any beneficial purchaser on behalf of whom the Purchaser is acting**):

_____ Category 1. A bank, as defined in Section 3(a)(2) of the U.S. Securities Act, whether acting in its individual or fiduciary capacity; or

_____ Category 2. A savings and loan association or other institution as defined in Section 3(a)(5)(A) of the U.S. Securities Act, whether acting in its individual or fiduciary capacity; or

_____ Category 3. A broker or dealer registered pursuant to Section 15 of the United States Securities Exchange Act of 1934, as amended; or

_____ Category 4. An insurance company as defined in Section 2(a)(13) of the U.S. Securities Act; or

_____ Category 5. An investment company registered under the United States Investment Company Act of 1940, as amended; or

_____ Category 6. A business development company as defined in Section 2(a)(48) of the United States Investment Company Act of 1940, as amended; or

_____ Category 7. A small business investment company licensed by the U.S. Small Business Administration under Section 301 (c) or (d) of the United States Small Business Investment Act of 1958, as amended; or

_____ Category 8. A plan established and maintained by a state, its political subdivisions or any agency or instrumentality of a state or its political subdivisions, for the benefit of its employees, with total assets in excess of U.S.$5,000,000; or

_____ Category 9. An employee benefit plan within the meaning of the United States Employee Retirement Income Security Act of 1974 in which the investment decision is made by a plan fiduciary, as defined in Section 3(21) of such Act, which is either a bank, savings and loan association, insurance company or registered investment adviser, or an employee benefit plan with total assets in excess of U.S.$5,000,000 or, if a self- directed plan, with investment decisions made solely by persons who are accredited investors; or

_____ Category 10. A private business development company as defined in Section 202(a)(22) of the United States Investment Advisers Act of 1940, as amended; or

_____ Category 11. An organization described in Section 501(c)(3) of the United States Internal Revenue Code of 1986, as amended, a corporation, a Massachusetts or similar business trust, a partnership, or a limited liability company, not formed for the specific purpose of acquiring the Offered Securities, with total assets in excess of U.S.$5,000,000; or

_____ Category 12. Any director or executive officer of the Corporation; or

_____ Category 13. A natural person whose individual net worth,1 or joint net worth with that person's spouse, at the time of purchase exceeds U.S.$1,000,000; or

_____ Category 14. A natural person who had an individual income in excess of U.S.$200,000 in each of the two most recent years or joint income with that person's spouse in excess of U.S.$300,000 in each of those years and has a reasonable expectation of reaching the same income level in the current year; or

_____ Category 15. A trust, with total assets in excess of U.S.$5,000,000, not formed for the specific purpose of acquiring the Offered Securities, whose purchase is directed by a sophisticated person as described in Rule 506(b)(2)(ii) of Regulation D under the U.S. Securities Act; or

_____ Category 16. Any entity in which all of the equity owners meet the requirements of at least one of the above categories.

(c) The Purchaser is authorized to consummate the purchase of the Offered Securities.

(d) The Purchaser is acquiring the Offered Securities as principal for its own account or for the account of one or more Accredited Investors for which it exercises sole investment discretion and not with the view to the resale or distribution thereof in violation of the U.S. Securities Act or any state securities laws.

(e) The Purchaser, alone or with its representatives, has such knowledge and experience in financial and business matters as to be capable of evaluating the merits, and risks of its investment in the Offered Securities and the Purchaser is able to bear the loss of the entire investment.

(f) The Purchaser is not purchasing the Offered Securities as a result of any "directed selling efforts" (as defined in Regulation S under the U.S. Securities Act ("Regulation S")) or any "general solicitation" or "general advertising" (as those terms are used in Regulation D), including advertisements, articles, notices or other communications published in any newspaper, magazine or similar media or disseminated on the Internet, or broadcast over radio or television, or any seminar or meeting whose attendees have been invited by general solicitation or general advertising.

[1] "net worth" means the excess of total assets at fair market value (including personal and real property, but excluding the estimated fair market value of a person's primary residence) over total liabilities. Total liabilities excludes any mortgage on the primary home in an amount of up to the home's estimated fair market value *as long as* the mortgage was incurred more than 60 days before the Offered Securities are purchased, *but includes* (i) any mortgage amount in excess of the home's fair market value and (ii) any mortgage amount that was borrowed during the 60-day period before the Offered Securities are purchased.

(g) The Offered Securities have not been and will not be registered under the U.S. Securities Act, or the securities laws of any state, and may not be offered or sold in the United States without registration under the U.S. Securities Act and any applicable state securities laws, unless exemptions or exclusions from such registrations are available, and in accordance with the Subscription Agreement, including this Certification.

(h) The Offered Securities will be "restricted securities" as defined in Rule 144(a)(3) under the U.S. Securities Act, and the Purchaser shall not offer, sell, pledge or otherwise transfer any of such securities, directly or indirectly, unless the offer, sale, pledge or transfer is:

(i) to the Corporation (although the Corporation is under no obligation to purchase any securities);

(ii) outside the United States in accordance with Rule 904 of Regulation S and in compliance with applicable local laws and regulations;

(iii) in compliance with (A) Rule 144A under the U.S. Securities Act to a person the seller reasonably believes to be a Qualified Institutional Buyer (as defined in Rule 144A); or (B) Rule 144 under the U.S. Securities Act ("Rule 144"), if available;

(iv) in another transaction that does not require registration under the U.S. Securities Act or any applicable state securities laws; or

(v) pursuant to an effective registration statement under the U.S. Securities Act; and

in each case accordance with applicable state securities laws; *and*

the Purchaser has prior to any transfer pursuant to clauses (iii)(B) or (iv) (and, if required by the Corporation, or the transfer agent for the Corporation, clause (ii)) above, furnished to the Corporation an opinion of counsel of recognized standing, or other evidence, reasonably satisfactory to the Corporation, to the effect that such proposed transfer does not require registration under the U.S. Securities Act or applicable state securities laws.

(i) Until such time as the same is no longer required under the requirements of the U.S. Securities Act or applicable state securities laws, the certificates representing the Offered Securities, and all certificates representing any securities issued in exchange thereof or in substitution therefor, will bear the following legend, in addition to any other legends that may be required under applicable securities laws:

"THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "U.S. SECURITIES ACT"), OR ANY STATE SECURITIES LAWS. THE HOLDER HEREOF, BY PURCHASING THESE SECURITIES, AGREES FOR THE BENEFIT OF XORTX THERAPEUTICS INC. (THE "CORPORATION") THAT SUCH SECURITIES MAY BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED ONLY: (A) TO THE CORPORATION, (B) OUTSIDE THE UNITED STATES IN ACCORDANCE WITH RULE 904 OF REGULATION S UNDER THE U.S. SECURITIES ACT ("REGULATION S"), (C) IN ACCORDANCE WITH (1) RULE 144A UNDER THE U.S. SECURITIES ACT OR (2) RULE 144 UNDER THE U.S. SECURITIES ACT, IF AVAILABLE, OR (D) PURSUANT TO ANOTHER EXEMPTION OR EXCLUSION FROM REGISTRATION UNDER THE U.S. SECURITIES ACT, AND IN EACH CASE, IN ACCORDANCE WITH ALL APPLICABLE STATE SECURITIES LAWS, AFTER, IN THE CASE OF TRANSFERS PURSUANT TO CLAUSE (C)(2) OR (D) (OR IF REQUIRED BY THE CORPORATION, OR ITS TRANSFER AGENT, CLAUSE (B)) ABOVE, THE HOLDER HAS PROVIDED TO THE CORPORATION A LEGAL OPINION OF COUNSEL OF RECOGNIZED STANDING OR OTHER EVIDENCE, REASONABLY SATISFACTORY TO THE CORPORATION, TO THE EFFECT

THAT THE SALE OF SUCH SECURITIES IS NOT REQUIRED TO BE REGISTERED UNDER THE U.S. SECURITIES ACT OR APPLICABLE STATE SECURITIES LAWS.

THESE SECURITIES MAY NOT CONSTITUTE "GOOD DELIVERY" IN SETTLEMENT OF TRANSACTIONS ON CANADIAN STOCK EXCHANGES."

provided, that if Offered Securities are being sold under Rule 904 of Regulation S in accordance with clause (B) above, at the time of sale the legend above may be removed by providing a duly completed and signed declaration to the Corporation and the transfer agent for the Corporation, in the form of Exhibit I attached to this Certificate (or in such other form as the Corporation may prescribe), together with any other evidence reasonably requested by the Corporation or transfer agent, which evidence may include an opinion of counsel of recognized standing, in form and substance reasonably satisfactory to the Corporation, to the effect that the transfer of the Offered Securities does not require registration under the U.S. Securities Act;

provided further, that if any of the Offered Securities are being sold pursuant to Rule 144, if available, the legend may be removed by delivering to the Corporation and the transfer agent for the Offered Securities being sold an opinion of counsel of recognized standing reasonably satisfactory to the Corporation and transfer agent for the Offered Securities being sold, to the effect that the legend is no longer required under applicable requirements of the U.S. Securities Act or applicable state securities laws.

Upon the Purchaser's compliance with either Rule 904 of Regulation S or Rule 144, and the Subscription Agreement, including this Certification, the Corporation shall use its reasonable commercial efforts to cause the transfer agent to remove the foregoing legend within two business days of receipt of the foregoing.

(j) The Warrants may not be exercised within the United States or by or on behalf of, or for the account of, a "U.S. Person" (as that term is defined in Regulation S) unless (i) the holder is an Accredited Investor, and (ii) such exercise is made pursuant to an available exemption from the registration requirements of the U.S. Securities Act and any applicable state securities laws.

(k) The certificates representing the Warrants, and all certificates issued in exchange therefor or in substitution thereof, shall bear, in addition to any legend otherwise required, the following legend:

THIS WARRANT AND THE SECURITIES DELIVERABLE UPON EXERCISE HEREOF HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER THE UNITED STATES SECURITIES ACT OF 1933, AS AMENDED (THE "U.S. SECURITIES ACT"), OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. THIS WARRANT MAY NOT BE EXERCISED IN THE UNITED STATES OR BY OR ON BEHALF OF, OR FOR THE ACCOUNT OR BENEFIT OF, A U.S. PERSON UNLESS THE SECURITIES ISSUABLE UPON EXERCISE OF THIS WARRANT HAVE BEEN REGISTERED UNDER THE U.S. SECURITIES ACT AND THE APPLICABLE SECURITIES LEGISLATION OF ANY SUCH STATE OR AN EXEMPTION FROM SUCH REGISTRATION REQUIREMENTS IS AVAILABLE. "UNITED STATES" AND "U.S. PERSON" ARE AS DEFINED BY REGULATION S UNDER THE U.S. SECURITIES ACT.

(l) The Corporation may make a notation in its records and instruct the transfer agent for the Offered Securities not to record any transfer of the Offered Securities to implement the restrictions or transfer set forth above.

(m) The Corporation has made available to the Purchaser or its agents such additional information requested by the Purchaser or on its behalf, which the Corporation possesses or can acquire without unreasonable effort or expense, that the Purchaser considered necessary to make an informed decision to invest in the Corporation. The Purchaser has had the opportunity to ask questions of, and receive answers from, representatives of the Corporation concerning the Corporation, its business and financial condition and the terms and conditions of the offering of the Offered Securities, and all such questions have been answered to the Purchaser's satisfaction. The Purchaser has not relied on any other representations or other information (whether oral or written) made by or on behalf of the Corporation other than as contemplated by the Subscription Agreement, including this Certificate.

(n) The Purchaser understands that the Corporation has no obligation to file, or present intention of filing, with the United States Securities and Exchange Commission or with any state securities administrator any registration statement in respect of resales of the Offered Securities.

(o) The Purchaser understands that if the Corporation were to ever be deemed to be, or to have at any time previously been, an issuer with (i) no or nominal operations and (ii) no or nominal assets other than cash and cash equivalents, Rule 144 may not be available with respect to transactions in the Offered Securities, and the Corporation is under no obligation to take, and has no present intention of taking, any required action in order to make Rule 144 available with respect to transactions in the Offered Securities.

(p) The Purchaser understands that no public market for the Offered Securities now exists in the United States and a public market may never exist for the Offered Securities in the United States.

(q) The Purchaser understands and acknowledges that there may be material tax consequences to the Purchaser of an acquisition or disposition of any of the Offered Securities. The Corporation gives no opinion and makes no representation with respect to the tax consequences to the Purchaser under United States federal, state, or local tax law, or foreign tax law, of the Purchaser's acquisition or disposition of the Offered Securities, including, without limitation, with respect to the potential applicability of United States federal income tax rules related to "passive foreign investment companies" ("PFIC") (as such term is defined in the United States Internal Revenue Code of 1986, as amended). In particular, the Purchaser acknowledges and understands that no determination has been made as to whether the Corporation will be classified as a PFIC for the current or any future tax year.

(r) The Purchaser is responsible for obtaining such legal and tax advice as it considers necessary in connection with the execution, delivery and performance by it of the Subscription Agreement, including this Certification.

(s) The Purchaser understands that the financial statements of the Corporation have been prepared in accordance with International Financial Reporting Standards, which differ in some respects from United States generally accepted accounting principles, and thus may not be comparable to financial statements of United States companies.

(t) The Purchaser understands that its ability to enforce civil liabilities under the United States federal securities laws may be affected adversely by, among other things, the fact that: (i) the Corporation is organized under the laws of Canada; (ii) some or all of the directors and officers of the Corporation are residents of countries other than the United States; and (iii) all or a substantial portion of the assets of the Corporation and said persons may be located outside the United States.

(u) The Purchaser understands that the Offered Securities have not been recommended by any United States federal or state securities commission or regulatory authority. The foregoing authorities have not confirmed the accuracy or determined the adequacy of the information in the Subscription Agreement or the schedules and exhibits attached hereto, and any representation to the contrary is a criminal offense.

(v) (a) If it is acquiring the Offered Securities as a fiduciary or agent for one or more investors, it has full power to make the foregoing representations, warranties and agreements on behalf of each such investor, and the foregoing representations, warranties and agreements are true and correct and will be binding upon each such investor; or (b) the undersigned is an agent of the Purchaser duly authorized to execute and deliver this letter on behalf of the Purchaser.

(w) The Purchaser understands and acknowledges that the representations, warranties and covenants contained in the Subscription Agreement, including this Certification, are made by it with the intent that they may be relied upon by the Corporation in determining the Purchaser's eligibility or the eligibility of others on whose behalf the Purchaser is contracting hereunder to purchase the Offered Securities. The Purchaser agrees that by accepting the Offered Securities it shall be representing and warranting that the representations and warranties above are true as at the date hereof and the Closing Date with the same force and effect as if they had been made by it at each date and that they shall survive the purchase by it of the Offered Securities and shall continue in full force and effect notwithstanding any subsequent disposition by it of such securities.

The Purchaser undertakes to notify the Corporation, the Agents and the US Affiliates immediately of any change in any representation, warranty or other information relating to the Purchaser or any Beneficial Purchaser set forth herein which takes place prior to the Closing.

Dated: _____, 2020.

If a Corporation, Partnership or Other Entity:

_____
Name of Entity

_____
Type of Entity

_____
Signature of Person Signing

_____
Print or Type Name and Title of Person Signing

If an Individual:

_____
Signature

_____
Print or Type Name

EXHIBIT I TO CERTIFICATION OF U.S. PURCHASER
DECLARATION FOR REMOVAL OF LEGEND

TO: _____, as transfer agent for the Common Shares of XORTX Therapeutics Inc.

AND TO: XORTX THERAPEUTICS INC.

The undersigned (a) acknowledges that the current sale of _____ Common Shares of XORTX Therapeutics Inc. (the "**Corporation**") to which this declaration relates, represented by certificate number _____, is being made in reliance on Rule 904 of Regulation S ("**Regulation S")** under the United States Securities Act of 1933, as amended (the "**U.S. Securities Act**"), and (b) certifies that (1) the undersigned is not an "affiliate" (as that term is defined in Rule 405 under the U.S. Securities Act) of the Corporation, (2) the offer of such securities was not made to a person in the United States and either

(A) at the time the buy order was originated, the buyer was outside the United States, or the seller and any person acting on its behalf reasonably believed that the buyer was outside the United States, or

(B) the transaction was executed in, on or through the facilities of the Toronto Stock Exchange or TSX Venture Exchange (or another "designated offshore securities market," as defined in Regulation S) and neither the seller nor any person acting on its behalf knows that the transaction has been prearranged with a buyer in the United States, (3) neither the seller nor any affiliate of the seller nor any person acting on any of their behalf has engaged or will engage in any "directed selling efforts" (as defined in Regulation S) in the United States in connection with the offer and sale of such securities, (4) the sale is bona fide and not for the purpose of "washing off" the resale restrictions imposed because the securities are "restricted securities" (as is defined in Rule 144(a)(3) under the U.S. Securities Act), (5) the seller does not intend to replace such securities with fungible unrestricted securities and (6) the contemplated sale is not a transaction, or part of a series of transactions that, although in technical compliance with Regulation S, is part of a plan or scheme to evade the registration provisions of the U.S. Securities Act. Unless otherwise defined herein, terms used herein have the meanings given to them by Regulation S under the U.S. Securities Act.

Dated: _____

_____
Name of Seller

By: _____

Name: _____

Title: _____

Affirmation by Seller's Broker-Dealer (required for sales pursuant to Section (b)(2)(B) above)

We have read the representation letter of _____ (the "**Seller**") dated _____, 20__, pursuant to which the Seller has requested that we sell, for the Seller's account, _____ [common shares] [warrants] represented by certificate number (the "**Securities**") of the Corporation. We have executed sales of the Securities pursuant to Rule 904 of Regulation S on behalf of the Seller. In that connection, we hereby represent to you as follows:

(1) no offer to sell Securities was made to a person in the United States;

(2) the sale of the Securities was executed in, on or through the facilities of a "designated offshore securities market" (as defined in Regulation S), and, to the best of our knowledge, the sale was not pre-arranged with a buyer in the United States.

(3) No "directed selling efforts" (as defined in Regulation S) were made in the United States by the undersigned, any affiliate of the undersigned, or any person acting on behalf of the undersigned; and

(4) We have done no more than execute the order or orders to sell the Securities as agent for the Seller and will receive no more than the usual and customary broker's commission that would be received by a person executing such transaction as agent.

For purposes of these representations: "**affiliate**" means a person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, the undersigned; "**directed selling efforts**" means any activity undertaken for the purpose of, or that could reasonably be expected to have the effect of, conditioning the market in the United States for the Securities (including, but not be limited to, the solicitation of offers to purchase the Securities from persons in the United States); and "**United States**" means the United Stated of America, its territories or possessions, any State of the United States, and the District of Columbia.

Legal counsel to the Corporation shall be entitled to rely upon the representations, warranties and covenants contained in this letter to the same extent as if this letter had been addressed to them.

Yours truly,

_____
Name of Firm

By: _____

Title: _____

EXHIBIT 6

Alberta Securities Commission
Suite 600, 250 – 5th Street SW
Calgary, Alberta T2P 0R4
Telephone: (403) 297-6454
Toll free in Canada: 1-877-355-0585
Facsimile: (403) 297-2082

British Columbia Securities Commission
P.O. Box 10142, Pacific Centre
701 West Georgia Street
Vancouver, British Columbia V7Y 1L2
Inquiries: (604) 899-6854
Toll free in Canada: 1-800-373-6393
Facsimile: (604) 899-6506
Email: inquiries@bcsc.bc.ca

The Manitoba Securities Commission
500 – 400 St. Mary Avenue
Winnipeg, Manitoba R3C 4K5
Telephone: (204) 945-2561
Toll free in Manitoba 1-800-655-5244
Facsimile: (204) 945-0330

Financial and Consumer Services Commission (New Brunswick)
85 Charlotte Street, Suite 300
Saint John, New Brunswick E2L 2J2
Telephone: (506) 658-3060
Toll free in Canada: 1-866-933-2222
Facsimile: (506) 658-3059
Email: info@fcnb.ca

Government of Newfoundland and Labrador
Financial Services Regulation Division
P.O. Box 8700
Confederation Building
2nd Floor, West Block
Prince Philip Drive
St. John's, Newfoundland and Labrador A1B 4J6
Attention: Director of Securities
Telephone: (709) 729-4189
Facsimile: (709) 729-6187

Government of the Northwest Territories
Office of the Superintendent of Securities
P.O. Box 1320
Yellowknife, Northwest Territories X1A 2L9
Attention: Deputy Superintendent, Legal & Enforcement
Telephone: (867) 920-8984
Facsimile: (867) 873-0243

Nova Scotia Securities Commission
Suite 400, 5251 Duke Street
Duke Tower
P.O. Box 458
Halifax, Nova Scotia B3J 2P8
Telephone: (902) 424-7768
Facsimile: (902) 424-4625

Government of Nunavut
Department of Justice
Legal Registries Division
P.O. Box 1000, Station 570
1st Floor, Brown Building
Iqaluit, Nunavut X0A 0H0
Telephone: (867) 975-6590
Facsimile: (867) 975-6594

Ontario Securities Commission
20 Queen Street West, 22nd Floor
Toronto, Ontario M5H 3S8
Telephone: (416) 593- 8314
Toll free in Canada: 1-877-785-1555
Facsimile: (416) 593-8122
Email: exemptmarketfilings@osc.gov.on.ca

Prince Edward Island Securities Office
95 Rochford Street, 4th Floor Shaw Building
P.O. Box 2000
Charlottetown, Prince Edward Island C1A 7N8
Telephone: (902) 368-4569
Facsimile: (902) 368-5283

Autorité des marchés financiers
800, Square Victoria, 22e étage
C.P. 246, Tour de la Bourse
Montréal, Québec H4Z 1G3
Telephone: (514) 395-0337 or 1-877-525-0337
Facsimile: (514) 873-6155 (For filing purposes only)
Facsimile: (514) 864-6381 (For privacy requests only)
Email: financementdessocietes@lautorite.qc.ca (For corporate finance issuers);
fonds_dinvestissement@lautorite.qc.ca (For investment fund issuers)

Financial and Consumer Affairs Authority of Saskatchewan
Suite 601 - 1919 Saskatchewan Drive
Regina, Saskatchewan S4P 4H2
Telephone: (306) 787-5842
Facsimile: (306) 787-5899
Public official contact regarding indirect collection of information: Director

Office of the Superintendent of Securities
Government of Yukon
Department of Community Services
307 Black Street, 1st Floor
Box 2703, C-6
Whitehorse, Yukon Y1A 2C6
Telephone: (867) 667-5466
Facsimile: (867) 393-6251
Email: Securities@gov.yk.ca

Exhibit 21.1

Subsidiaries of XORTX

Legal Name	Jurisdiction of Organization
XORTX Pharma Corp.	Canada

Exhibit 23.1

Smythe CPA

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation in the Registration Statement on Form F-1 of Xortx Therapeutics Inc. of our auditors' report dated April 23, 2021, relating to the consolidated financial statements for the years ended December 31, 2020 and 2019.

We also consent to the reference to us as experts in matters of accounting and audit in this registration statement.

Smythe LLP

Smythe LLP
Chartered Professional Accountants

Vancouver, Canada
May 25, 2021