

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

Form 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16  
UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of April 2022

Commission File Number: 001-40858

XORTX Therapeutics Inc.

Suite 2400 - 745 Thurlow Street, Vancouver, British Columbia, Canada, V6E 0C5

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F  Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): \_\_\_\_

**Note:** Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): \_\_\_\_

**Note:** Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR.

---

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

XORTX THERAPEUTICS INC.  
(Registrant)

Date: April 12, 2022

By: /s/ Allen Davidoff

Name: Allen Davidoff

Title: Chief Executive Officer

---

**EXHIBIT INDEX**

[99.1](#) [Audited Consolidated Financial Statements for the year ended December 31, 2021, 2020 and 2019](#)

[99.2](#) [Management Discussion and Analysis for the year ended December 31, 2021](#)

[99.3](#) [CEO Certificate](#)

[99.4](#) [CFO Certificate](#)



**CONSOLIDATED FINANCIAL STATEMENTS**  
**FOR THE YEARS ENDED DECEMBER 31, 2021, 2020 AND 2019**  
**(Expressed in Canadian Dollars)**

**TO THE SHAREHOLDERS AND DIRECTORS OF XORTX THERAPEUTICS INC.**

***Opinion on the Consolidated Financial Statements***

We have audited the accompanying consolidated statements of financial position of XORTX Therapeutics Inc. (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of comprehensive loss, changes in shareholders' equity and cash flows for the years ended December 31, 2021, 2020 and 2019, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for the years ended December 31, 2021, 2020 and 2019, in conformity with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board.

***Basis for Opinion***

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

***Critical Audit Matters***

Critical audit matters are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. We determined that there are no critical audit matters.

*/s/ Smythe LLP, Chartered Professional Accountants*

We have served as the Company's auditor since 2018.

Vancouver, Canada  
 April 7, 2022

**XORTX THERAPEUTICS INC.**  
**Consolidated Statements of Financial Position**  
 (Expressed in Canadian Dollars)

	Note	December 31, 2021	December 31, 2020
<b>Assets</b>		\$	\$

<b>Current</b>			
Cash		18,851,244	171,271
Accounts receivable		51,539	14,351
Contract payments	5	-	1,606,320
Prepaid expenses	6	1,270,556	264,199
		20,173,339	2,056,141
<b>Non-current</b>			
Contract payments	5	1,606,320	-
Intangible assets	7	256,243	234,316
<b>Total Assets</b>		<b>22,035,902</b>	<b>2,290,457</b>
<b>Liabilities</b>			
<b>Current</b>			
Accounts payable and accrued liabilities	8,10	700,999	1,034,213
		700,999	1,034,213
<b>Non-current</b>			
Derivative warrant liability	9(g)	4,597,332	-
<b>Total Liabilities</b>		<b>5,298,331</b>	<b>1,034,213</b>
<b>Shareholders' Equity</b>			
Share capital	9	20,009,154	8,258,395
Share-based payments, warrant reserve and other	9	6,386,459	1,003,609
Obligation to issue shares	7(e)	32,238	32,238
Deficit		(9,690,280)	(8,037,998)
<b>Total Shareholders' Equity</b>		<b>16,737,571</b>	<b>1,256,244</b>
<b>Total Liabilities and Shareholders' Equity</b>		<b>22,035,902</b>	<b>2,290,457</b>

Nature of Operations (Note 1)  
Commitments (Note 14)

/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, 2021, 2020 and 2019**  
**(Expressed in Canadian Dollars)**

	Note	2021	2020	2019
		\$	\$	\$
<b>Expenses</b>				
Amortization	7	17,882	20,439	19,900
Consulting	10	724,272	102,880	46,561
Directors' fees	10	62,200	-	-
General and administrative		176,099	9,516	17,344
Investor relations		518,615	241,177	34,782
Listing fees		236,801	52,138	42,495
Professional fees	10	272,943	162,580	108,427
Research and development	10	853,124	277,455	39,897
Share-based payments	9(f),10	499,158	293,443	26,317
Travel		2,339	8,460	36,076
Wages and benefits	10	286,090	227,905	194,166
<b>Loss before other items</b>		<b>(3,649,523)</b>	<b>(1,395,993)</b>	<b>(565,965)</b>
Accretion		-	(846)	(1,638)
Transaction costs on derivative warrant liability				
	9(b)	(1,623,680)	-	-
Fair value adjustment on derivative warrant liability	9(g)	3,299,768	-	-
Foreign exchange gain (loss)		326,751	2,961	(26,397)
Impairment of intangible assets	7	-	(64,562)	-
Interest and other expenses		(5,598)	(12,666)	(35,576)
Forgiveness of debt		-	91,014	-
Recovery of provision for patent acquisition	7(b)	-	95,490	-

<b>Net loss and comprehensive loss for the year</b>	(1,652,282)	(1,284,602)	(629,576)
<b>Basic and diluted loss per common share</b>	(0.17)	(0.19)	(0.12)
<b>Weighted average number of common shares outstanding</b>			
Basic and diluted	9,847,641	6,664,025	5,359,444

The accompanying notes are an integral part of these consolidated financial statements.

4

#### XORTX THERAPEUTICS INC.

##### Consolidated Statements of Changes in Shareholders' Equity

For the years ended December 31, 2021, 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
			\$	\$	\$	\$	\$	\$	\$
<b>Balance, December 31, 2018</b>		5,359,444	5,863,872	581,486	-	-	5,202	(6,129,022)	321,538
Share-based payments		-	-	26,317	-	-	-	-	26,317
Share subscriptions received in advance		-	-	-	-	70,000	-	-	70,000
Net loss for the year		-	-	-	-	-	-	(629,576)	(629,576)
<b>Balance, December 31, 2019</b>		5,359,444	5,863,872	607,803	-	70,000	5,202	(6,758,598)	(211,721)
Shares issued pursuant to private placement	9(b)	1,555,314	2,465,023	91,297	-	(70,000)	-	-	2,486,320
Share issuance costs	9(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	9(f)	-	-	293,443	-	-	-	-	293,443
Net loss for the year		-	-	-	-	-	-	(1,284,602)	(1,284,602)
<b>Balance, December 31, 2020</b>		<b>6,914,758</b>	<b>8,258,395</b>	<b>1,003,609</b>	<b>32,238</b>	-	-	<b>(8,037,998)</b>	<b>1,256,244</b>
Shares issued pursuant to private placements	9(b)	2,085,687	763,572	-	-	-	-	-	763,572
Shares issued pursuant to IPO	9(b)	3,261,000	9,252,009	-	-	-	-	-	9,252,009
Reclassification of derivative warrant liability	9	-	-	4,460,000	-	-	-	-	4,460,000
Share issuance costs	9(b)	-	(1,377,364)	521,251	-	-	-	-	(856,113)
Options exercised	9(b)	51,106	149,172	(65,172)	-	-	-	-	84,000
Warrants exercised	9(b)	651,583	2,888,370	(32,387)	-	-	-	-	2,855,983
Shares issued for services	9(b)	25,553	75,000	-	-	-	-	-	75,000
Share-based payments	9(f)	-	-	499,158	-	-	-	-	499,158
Net loss for the year		-	-	-	-	-	-	(1,652,282)	(1,652,282)
<b>Balance, December 31, 2021</b>		<b>12,989,687</b>	<b>20,009,154</b>	<b>6,386,459</b>	<b>32,238</b>	-	-	<b>(9,690,280)</b>	<b>16,737,571</b>

The accompanying notes are an integral part of these consolidated financial statements.

5

#### XORTX THERAPEUTICS INC.

##### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

	2021	2020	2019
	\$	\$	\$
<b>Cash provided by (used in):</b>			
<b>Operating activities</b>			
Net loss for the year	(1,652,282)	(1,284,602)	(629,576)
Items not affecting cash:			
Accretion expense	-	846	1,638

Amortization	17,882	20,439	19,900
Forgiveness of debt	-	(91,014)	-
Impairment of intangible assets	-	64,562	-
Fair value adjustment on derivative warrant liability	(3,299,768)	-	-
Share-based payments	499,158	293,443	26,317
Shares issued for services	75,000	-	-
Unrealized foreign exchange (gain) loss	(325,741)	1,201	34,064
Recovery of provision for patent acquisition	-	(95,490)	-
Changes in non-cash operating assets and liabilities:			
Fund held in trust	-	-	(70,000)
Accounts receivable	(37,188)	-	14,788
Prepaid expenses	(1,006,357)	(42,998)	-
Accounts payable and accrued liabilities	(333,214)	405,212	353,289
	(6,062,510)	(728,401)	(249,580)
<b>Investing activity</b>			
Acquisition of intangible assets	(39,809)	(14,350)	(7,037)
<b>Financing activities</b>			
Proceeds from issuance of shares	22,798,581	900,000	-
Cash share issuance costs	(856,113)	(44,592)	-
Options exercised	84,000	-	-
Warrants exercised	2,430,083	-	-
Deferred share issuance costs	-	-	(14,788)
Share subscription received in advance	-	-	70,000
	24,456,551	855,408	55,212
<b>Effect of foreign exchange on cash</b>	325,741	-	-
<b>Increase in cash</b>	18,679,973	112,657	(201,405)
<b>Cash, beginning of year</b>	171,271	58,614	260,019
<b>Cash, end of year</b>	18,851,244	171,271	58,614
<b>Supplemental Cash Flow and Non-Cash Investing and Financing Activities Disclosure</b>			
Recognition of derivative warrant liabilities	12,783,000	-	-
Derivative warrant liability reclassified to reserves	4,460,000	-	-
Derivative warrant liability reclassified to share capital on exercise of warrants	425,900	-	-
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	-	436,240	-

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, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 1. Nature of operations

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.

On September 23, 2021, the Company completed a share consolidation of the common shares on a basis of 1 post-consolidation common share for 11.74 pre-consolidation common shares (the “Consolidation”). As required by IAS 33, Earnings per Share, all information with respect to the number of common shares and issuance prices for time periods prior to the Consolidation have been restated to reflect the Consolidation.

XORTX is a public company listed on the TSX Venture Exchange (the “TSXV”), on the Nasdaq Stock Market (“Nasdaq”) under the symbol “XRTX”, and on the Börse Frankfurt under the symbol “ANU”. The Company’s operations and mailing address is Suite 4000, 421 - 7th Avenue SW, Calgary, Alberta, T2P 4K9 and its head office 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.

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. Although there is no certainty, management is of the opinion that additional funding for future projects and operations can be raised as needed. 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.

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. To date, COVID-19 has had little impact on the Company's operations 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 except for financial instruments which have been measured at fair value. These consolidated financial statements were prepared on an accrual basis except for cash flow information.

7

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

## 2. Basis of preparation (continued)

### Basis of Measurement and Presentation (continued)

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.

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 7, 2022.

## 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 as at December 31, 2021:

	Classification
Cash	FVTPL
Accounts payable and accrued liabilities	amortized cost
Derivative warrant liability	FVTPL

#### 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).

8

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

## 3. Accounting policies (continued)

### Financial Instruments (continued)

## b) Measurement (continued)

### 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 comprehensive loss. 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 comprehensive loss in the period in which they arise. Where management has opted to recognize a financial liability at FVTPL, any changes associated with the Company's own credit risk will be recognized in other comprehensive 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 comprehensive loss, 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 comprehensive loss. 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 statements of comprehensive loss.

---

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

## 3. Accounting policies (continued)

### d) Derecognition (continued)

#### 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 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.

#### Derivative warrant liabilities

Derivative warrant liabilities issued in relation to equity offerings that fail to meet the definition of equity are classified as derivative liabilities and measured at fair value with changes in fair value recognized in the consolidated statement of comprehensive loss at each period end. In instances where units consisting of a common share and a warrant classified as a derivative liability are issued, the Company recognizes the unit as a compound financial instrument. Compound financial instruments represent financial instruments that include equities and derivatives, which are accounted for at fair value with changes in fair value recorded in profit or loss. In accordance with IAS 32 Financial Instrument: Presentation, when a compound instrument has been determined to contain a financial liability and an equity component, the fair value of the instrument is bifurcated by first determining the fair value of the liability, and then allocating any residual value to the equity instrument.

The derivative liabilities will ultimately be converted into the Company's equity (Share Capital) when the warrants are exercised or will be extinguished on the expiry of the outstanding warrants and will not result in the outlay of any cash by the Company. Immediately prior to exercise, the warrants are remeasured at their intrinsic value (the intrinsic value being the share price at the date the warrant is exercised less the exercise price of the warrant), and this value is transferred to Share Capital on exercise. Any remaining fair value is recorded through profit or loss as part of the change in estimated fair value of the derivative warrant liabilities.

The Company uses the Black-Scholes pricing model to estimate fair value at each period end date. The key assumptions used in the model are described in Note 9(g).

**XORTX THERAPEUTICS INC.****Consolidated Statements of Cash Flows**

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

**3. Accounting policies (continued)****d) Derecognition (continued)****Share-based payments**

The Company has a stock option plan that is described in Note 9 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 and other equity offerings, 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 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' Warrant Units is measured using the Geske compound option pricing model; both require 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.

**XORTX THERAPEUTICS INC.****Consolidated Statements of Cash Flows**

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

**3. Accounting policies (continued)****d) Derecognition (continued)****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.

**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.

#### 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.

12

### XORTX THERAPEUTICS INC.

#### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 4. Critical accounting judgments and estimates (Continued)

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 and warrant liabilities

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.

Warrant liabilities are accounted for as derivative liabilities as exercise price is not fixed. The assumptions and models used for estimating fair value for share-based payment transactions and warrant liabilities are disclosed in Note 9.

##### Classification of contract payments

In concluding that contract payments are a non-current asset, management considered when future regulatory and clinical trial programs are anticipated to be completed. During the year ended December 31, 2021, management assessed that the future regulatory and clinical trial programs would not be completed within 12 months from year end and therefore reclassified contract payments as a non-current asset.

##### 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, 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.

##### Determination of functional currency

In concluding that the Canadian dollar is the functional currency of the Company and its subsidiary, management considered the currency that mainly influences the cost of providing goods and services in the primary economic environment in which each entity operates, or if there has been a change in events or conditions that determined the primary economic environment.

##### Treatment of research and development costs

Costs to develop products are capitalized to the extent that the criteria for recognition as intangible assets in IAS 38 Intangible Assets are met. Those criteria require that the product is technically and economically feasible, the Company has the intention and ability to use the asset, and how the asset will generate future benefits. Management assessed the capitalization of development costs based on the attributes of the development project, perceived user needs, industry trends and expected future economic conditions. Management considers these factors in aggregate and applies significant judgment to determine whether the product is feasible. The Company has not capitalized any development costs as at December 31, 2021.

##### Current and deferred taxes

The measurement of income taxes payable and deferred income tax assets and liabilities requires management to make judgments in the interpretation and application of the relevant tax laws. Such differences may result in eventual tax payments differing from amounts accrued. Reported amounts for deferred tax assets and liabilities are based on management's expectation for the timing and amounts of future taxable income or loss, as well as future taxation rates. Changes to these underlying estimates may result in changes to the carrying value, if any, of deferred income tax assets and liabilities.

13

### XORTX THERAPEUTICS INC.

#### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 5. Contract payments

During the year ended December 31, 2020, the Company entered into an agreement with Prevail InfoWorks Inc. As part of the agreement, the Company paid \$1,606,320 through the issuance of units in the private placement (US\$1,200,000 at the exchange rate on the date of the transaction) to be applied to future regulatory and clinical trial programs. The 977,318 units issued were measured by reference to their fair value on the issuance date, which is equal to \$1.64 per unit in the concurrent private placement. The deposit was reclassified as a non-current asset during the year ended December 31, 2021 as it has been determined to be long-term in nature.

#### 6. Prepaid expenses

The Company's prepaid expenses relate to the following:

	December 31 2021	December 31 2020
	\$	\$
Research and development	714,716	220,084

Insurance	441,388	-
Investor relations conferences and services	60,254	44,115
Consulting	50,000	-
Administrative services	4,198	-
	1,270,556	264,199

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 made a payment of US\$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 payments against the accounts payable balance owing to Cato and forgive interest on these balances of \$36,234.

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 7. Intangible assets

Cost	Total
	\$
Balance, December 31, 2019	378,814
Additions	46,588
Impairment	(100,220)
Balance, December 31, 2020	325,182
Additions	39,809
<b>Balance, December 31, 2021</b>	<b>364,991</b>
Accumulated amortization	Total
	\$
Balance, December 31, 2019	106,426
Amortization	20,098
Impairment	(35,658)
Balance, December 31, 2020	90,866
Amortization	17,882
<b>Balance, December 31, 2021</b>	<b>108,748</b>
Carrying values	Total
	\$
At December 31, 2020	234,316
<b>At December 31, 2021</b>	<b>256,243</b>

The Company has licensed intellectual property from various third parties. The intangible assets relate solely to licensed intellectual property and there are no other classes of intangible assets. The intangible assets are 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 143,100 common shares at \$0.35 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.

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 judgment and estimates of the recoverable amount, it is classified within level 3 of the fair value hierarchy. During the year ended December 31, 2020, the purchase provision was reversed resulting in a gain of \$95,490 on recovery of provision.

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 7. Intangible assets (continued)

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 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 considerations:

- i) An annual license fee of US\$1,000 (2021 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 180,397 shares of common stock of the Company (160,783 have been issued to UFRF as at December 31, 2021. 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 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.

## 8. Accounts payable and accrued liabilities

	December 31 2021	December 31 2020
	\$	\$
Trade payables	410,701	389,982
Accrued liabilities	290,298	644,231
Total	700,999	1,034,213

16

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

## 9. Share capital and reserves

### a) Authorized and issued

Unlimited common shares – 12,989,687 issued at December 31, 2021 (2020 - 6,914,758).

### b) Issuances

#### Year ended December 31, 2021:

On February 9, 2021, the Company closed a private placement with the issuance of 2,085,687 units at a subscription price of \$2.935 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 \$4.70 for a period of five 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 is greater than \$14.09 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.

The proceeds were allocated \$5,358,000 to the derivative warrant liability (Note 9(g)) and the residual \$763,572 was allocated to common shares

In connection with the private placement, the Company paid \$171,347 in cash commissions, incurred additional issuance costs of \$7,897 and issued 58,288 finders’ warrants with a fair value of \$150,000 (Note 9(e)). Each finders’ warrant is exercisable into one common share at a price of \$4.70 and having the same expiry, acceleration and anti-dilution provisions as the warrants included in the private placement. The costs were allocated between common shares and derivative warrant liability in proportion to their initial carrying amounts with \$41,068 recorded as a reduction of equity and \$287,946 recorded as transaction costs on derivative warrant liability.

On October 15, 2021, the Company listed its common shares on the Nasdaq Stock Market (“Nasdaq”) under the symbol “XRTX” and closed an underwritten public offering of 2,906,000 units (the “US IPO Offering”), with each unit consisting of one common share, no par value, and one warrant to purchase one common share at a public offering price of US\$4.13 per Unit, for gross proceeds of \$14,851,850 (US\$12,001,780). The warrants have an initial exercise price of US\$4.77 per share and have a term of five years. In addition, the Company granted the underwriters a 45-day option to purchase up to an additional 435,900 common shares and/or warrants to purchase up to an additional 435,900 common shares at the US IPO Offering price less the underwriting discounts. On October 15, 2021, the underwriter exercised its option to purchase additional warrants to purchase up to an additional 435,900 common shares.

On November 8, 2021, the underwriter partially exercised its 45-day option for 355,000 common shares at US\$4.13 per share, resulting in additional gross proceeds to the Company of \$1,825,159 (US\$1,466,150) which increased the US IPO Offering to 3,261,000 common shares and 3,341,900 warrants.

The proceeds were allocated \$7,425,000 to the derivative warrant liability (Note 9(g)) and the residual \$7,426,850 was allocated to common shares.

17

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

## 9. Share capital and reserves (continued)

### b) Issuances (continued)

In connection with the US IPO Offering, the Company incurred issuance costs of \$2,300,549 and issued 145,300 finders' warrants with a fair value of \$371,251. The costs were allocated between common shares and derivative warrant liability in proportion to their initial carrying amounts with \$1,336,066 recorded as a reduction of equity and \$1,335,734 recorded as transaction costs on derivative warrant liability.

The Company issued 51,106 common shares for the exercise of options in the amount of \$84,000. A value of \$65,172 was transferred from reserves to share capital as a result.

The Company issued 651,583 common shares for the exercise of warrants in the amount of \$2,430,083. A value of \$32,387 was transferred from reserves to share capital and a value of \$425,900 was transferred from the derivative warrant liability to share capital as a result.

Pursuant to the terms of a consulting agreement, the Company issued 25,553 common shares with a fair value of \$75,000 in exchange for services.

#### Year ended December 31, 2020:

On February 28, 2020, the Company closed a private placement, through the issuance of 1,555,314 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.

The 977,318 units issued to Prevail Partners LLC were measured by reference to their fair value on the issuance date, which is equal to \$1.64 per unit in the concurrent private placement.

Each unit comprised one common share and one common share purchase warrant exercisable at \$2.94 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 is greater than \$4.11 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 20<sup>th</sup> 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 11,896 finders' warrant units valued at \$11,066, with each finder's warrant unit being exercisable at \$1.64 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 \$2.94 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.

### c) Escrow Shares

Following the closing of the RTO, the Company had an aggregate of 441,946 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, 2021, there were nil shares (2020 - 66,292) remaining in escrow.

18

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

## 9. Share capital and reserves (continued)

### d) Common Share Purchase Warrants

A summary of the changes in warrants for the years ended December 31, 2021 and 2020 is presented below:

	Number of Warrants	Exercise price
Balance, December 31, 2019	341,119	\$ 9.39
Granted – February 28, 2020	1,555,317	\$ 2.94
Expired – January 10, 2020	(341,119)	\$ 9.39
<b>Balance, December 31, 2020</b>	<b>1,555,317</b>	<b>\$ 2.94</b>
Granted – February 9, 2021	2,085,687	\$ 4.70
Granted – October 15, 2021	3,341,900	*US\$4.77
Exercised	(640,012)	\$ 3.34
Expired	(1,215,816)	\$ 2.94
<b>Balance, December 31, 2021</b>	<b>5,127,076</b>	<b>\$ 5.58</b>

\*\$6.05 as at December 31, 2021

The weighted average contractual remaining life of the unexercised warrants was 4.56 years (2020 - 0.16 years).

The following table summarizes information on warrants outstanding at December 31, 2021:

Exercise Price	Number Outstanding	Expiry date	Average Remaining Contractual Life
\$4.70	1,785,176	February 9, 2026	4.11 years
US\$4.77	3,341,900	October 15, 2026	4.79 years

### e) Finders' Warrants

A summary of the changes in finders' warrants for the years ended December 31, 2021 and 2020 is presented below:

	Number of Warrants	Exercise price
Balance, December 31, 2019	-	-
Granted – February 28, 2020 – finders' warrants	11,896	\$ 1.64
Balance, December 31, 2020	11,896	\$ 1.64
Granted – February 9, 2021 – finders' warrants	58,288	\$ 4.70
Granted – October 15, 2021 – finders' warrants	145,300	US\$4.77
Exercised	(11,571)	\$ 1.87
Expired	(1,193)	\$ 1.64
<b>Balance, December 31, 2021</b>	<b>202,720</b>	<b>\$ 5.66</b>

\*\$6.05 as at December 31, 2021

The weighted average contractual remaining life of the unexercised finders' warrant was 4.60 years (2020 - 0.16 years).

19

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 9. Share capital and reserves (continued)

##### e) Finders' Warrants (continued)

The following table summarizes information on finders' warrants outstanding at December 31, 2021:

Exercise Price	Number Outstanding	Expiry date	Average Remaining Contractual Life
\$4.70	57,420	February 9, 2026	4.11 years
US\$4.77	145,300	October 15, 2026	4.79 years

The fair value of finders' warrant units issued on February 28, 2020 was estimated at \$11,066 on the date of grant using Black-Scholes. The exercise price of the unit of \$1.64; expected life of 1.0 years; expected volatility of 99.76%; risk free rate of 1.37%; and expected dividend yield of 0%.

The fair value of the finders' warrants issued on February 9, 2021 was estimated at \$150,000 on the date of grant using Black-Scholes. The exercise price of the unit of \$4.70; expected life of 5.0 years; expected volatility of 100%; risk free rate of 0.58%; and expected dividend yield of 0%.

The fair value of the finders' warrants issued on October 15, 2021 was estimated at \$371,251 on the date of grant using Black-Scholes. The exercise price of the unit of US\$4.77; expected life of 5.0 years; expected volatility of 100%; risk free rate of 1.5%; and expected dividend yield of 0%.

##### 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.

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:

	2021	2020
Dividend yield	Nil	Nil
Annualized volatility	100%	151.64% - 152.24%
Risk-free interest rate	0.36% - 1.19%	0.33%
Expected life	5 years	5 years

The risk-free interest rate is the yield on zero-coupon Canadian Treasury Bills 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 or historical share price of comparable companies, excluding specific time frames in which volatility was affected by specific transactions that are not considered to be indicative of the Company's expected share price volatility. The Company has not declared dividends in the past.

The share-based payment expense recognized was \$499,158 during the year ended December 31, 2021 (2020 - \$293,443; 2019 - \$26,317).

20

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 9. Share capital and reserves (continued)

##### f) Stock Options (continued)

A summary of the changes in stock options for the years ended December 31, 2021 and 2020 is presented below:

	Number of Options	Exercise price
Balance, December 31, 2019	183,124	\$ 5.87
Granted – June 23, 2020	268,307	\$ 1.64
Granted – August 25, 2020	12,776	\$ 2.82
Balance, December 31, 2020	464,207	\$ 3.29
Granted – January 11, 2021	59,624	\$ 3.29
Granted – May 12, 2021	42,588	\$ 1.88
Granted – June 16, 2021	21,294	\$ 1.76
Granted – July 14, 2021	63,882	\$ 2.41
Granted – December 21, 2021	86,495	\$ 2.54
Exercised	(51,106)	\$ 1.64
Expired	(80,917)	\$ 3.40
<b>Balance, December 31, 2021</b>	<b>606,067</b>	<b>\$ 3.10</b>
<b>Vested and exercisable, December 31, 2021</b>	<b>482,683</b>	<b>\$ 3.38</b>

The weighted average contractual remaining life of the unexercised options was 3.42 years (2020 - 3.64 years).

The following table summarizes information on stock options outstanding at December 31, 2021:

Exercise Price	Number Outstanding	Number Exercisable	Average remaining Contractual Life
\$5.87	127,760	127,760	1.21 years
\$5.87	21,294	21,294	1.85 years
\$1.64	170,354	114,991	3.48 years
\$2.82	12,776	12,776	3.66 years
\$3.29	59,624	59,624	4.03 years
\$1.88	42,588	27,801	4.36 years
\$1.76	21,294	21,294	4.46 years
\$2.41	63,882	10,648	4.54 years
\$2.54	86,495	86,495	4.98 years
	<b>606,067</b>	<b>482,683</b>	

#### g) Derivative Warrant Liability

##### Private Placement Warrants

During the year ended December 31, 2021, the Company issued 2,085,687 warrants for the Company's common shares pursuant to a financing in February 2021 as described above.

The warrants issued as part of the unit contain a ratchet provision that provides for an adjustment in the exercise price if shares or securities convertible to shares are sold at a price lower than the exercise price. Therefore, since the warrants (not including compensation warrants) may be settled other than by the exchange of a fixed amount of cash, they meet the definition of a derivative financial liability.

#### XORTX THERAPEUTICS INC.

##### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 9. Share capital and reserves (continued)

##### g) Derivative warrant liability (continued)

##### Private Placement Warrants (continued)

The fair value of the warrants was estimated at \$5,358,000 on the date of grant using the Black-Scholes model with the following assumptions: share price on date of grant of \$3.64; exercise price of the warrant of \$4.70; expected life of 5.0 years; expected volatility of 100%; risk free rate of 0.58%; and expected dividend yield of 0%.

During the year ended December 31, 2021, 640,012 of these warrants were exercised and a value of \$425,900 was transferred from the derivative warrant liability to share capital as a result. On October 15, 2021, the ratchet provision expired when the Company listed its common shares on the Nasdaq. As a result of the expiry, the warrants would now be settled by a fixed amount of cash and were reclassified as an equity instrument. The fair value of the derivative warrant liability as of October 15, 2021 of \$4,460,000 reclassified to reserves.

During the year ended December 31, 2021, the Company issued warrants for the Company's common shares pursuant to the US IPO Offering discussed above. These warrants were recorded as a derivative financial liability as the exercise price of the units is denominated in a currency other than the functional currency of the Company and therefore may be settled other than by the exchange of a fixed amount of cash. The fair value of the warrants was estimated at \$7,425,000 on the date of grant using the Black-Scholes model with the following assumptions: share price on date of grant of US\$3.02; exercise price of the warrant of US\$4.77; expected life of 5.0 years; expected volatility of 100%; risk free rate of 1.50%; and expected dividend yield of 0%.

The balance of the derivative warrant liabilities (level 3) is as follows:

	December 31 2021
<b>Balance at December 31, 2019 and 2020</b>	<b>\$ -</b>
Warrants issued February 9, 2021	5,358,000
Warrants exercised	(425,900)
Fair value adjustment	(472,100)
Fair value reclassified to reserves	(4,460,000)
Warrants issued October 15, 2021	7,425,000
Fair value adjustment	(2,827,668)
<b>Balance at December 31, 2021</b>	<b>\$ 4,597,332</b>

Significant assumptions used in determining the fair value of the derivative warrant liabilities at December 31, 2021 are as follows:

	December 31, 2021
Share price	\$ 2.05
Risk-free interest rate	1.23%
Dividend yield	0%
Expected volatility	100%
Remaining term (in years)	4.8

The fair value is classified as level 3 as expected volatility is determined using historical volatility and is therefore not an observable input.

22

#### XORTX THERAPEUTICS INC.

##### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 9. Share capital and reserves (continued)

##### h) Share Consolidation

On September 23, 2021, the Company completed a share consolidation of the common shares on a basis of 1 post-consolidation common share for 11.74 pre-consolidation common shares (the "Consolidation"). As required by IAS 33, Earnings per Share, all information with respect to the number of common shares and issuance prices for time periods prior to the Consolidation have been restated to reflect the Consolidation.

#### 10. 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.

During the year ended December 31, 2021, the Company incurred the following transactions with related parties:

- a) Wages and benefits were paid or accrued to officers of the Company in the amount of \$278,840 (2020 - \$196,097; 2019 - \$194,166).
- b) Professional fees were paid or accrued to a former officer of the Company in the amount of \$58,500 (2020 - \$30,000; 2019 - \$30,000).
- c) Professional fees were paid or accrued to an officer of the Company in the amount of \$53,000 (2020 - \$Nil; 2019 - \$Nil).
- d) Research and development fees were paid or accrued to an officer of the Company in the amount of \$106,366 (2020 - \$Nil; 2019 - \$Nil).
- e) Consulting fees were accrued to directors of the Company in the amount of \$34,950 (2020 - \$36,000; 2019 - \$Nil) and directors fees were accrued to the directors of the Company in the amount of \$62,200 (2020 - \$Nil; 2019 - \$Nil).
- f) As at December 31, 2021, \$Nil (2020 - \$52,450) was payable to the former Chief Financial Officer ("CFO") of the Company for CFO services, and \$81,104 (2020 - \$20,340) was payable to directors of the Company, \$25,000 (2020 - \$518,084) was accrued to the Chief Executive Officer ("CEO") of the Company, for CEO services, and \$47,543 (2020 - \$Nil) was accrued to the Chief Medical Officer ("CMO") of the Company, for consulting services. The balances are unsecured, non-interest bearing, and have no fixed terms of repayment.

23

#### XORTX THERAPEUTICS INC.

##### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

#### 10. Related party transactions (continued)

g) Management compensation transactions for the years ended December 31, 2021, 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

**11. 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:

	2021	2020	2019
	\$	\$	\$
Net loss for the year	(1,652,000)	(1,285,000)	(630,000)
Statutory tax rate	27%	27%	27%
Expected income tax recovery	(446,000)	(347,000)	(170,000)
Decrease to income tax recovery due to:			
Non-deductible permanent differences	135,000	79,000	16,000
Temporary differences	(516,000)	6,000	-
(Over) under provided in prior years	-	(278,000)	13,000
Change in tax assets not recognized	827,000	540,000	141,000
Income tax recovery	-	-	-

The significant components of the Company's deferred tax assets are as follows:

	December 31, 2021	December 31, 2020
	\$	\$
Share issuance costs	529,000	18,000
Cumulative eligible capital	105,000	100,000
Operating losses carried forward	1,652,000	1,341,000
Total deferred tax assets	2,286,000	1,459,000
Deferred tax assets not recognized	(2,286,000)	(1,459,000)
	-	-

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 \$6,119,000 that may be available for tax purposes. The losses expire as follows:

**XORTX THERAPEUTICS INC.****Consolidated Statements of Cash Flows**

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

**11. Income taxes (continued)**

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
2041	1,153,000
Total	6,119,000

**12. Financial instruments and risk management**

The Company's financial instruments consist of cash, accounts payable and accrued liabilities, and derivative warrant liability. The fair values of these financial instruments, other than derivative warrant liability, approximate their carrying values at December 31, 2021, 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, 2021 and 2020 and categorized into levels of the fair value hierarchy:

	Level	December 31, 2021		December 31, 2020	
		Carrying Value	Estimated Fair Value *	Carrying Value	Estimated Fair Value *
<b>FVTPL</b>					
Cash	1	18,851,244	18,851,244	171,271	171,271
<b>Other financial liabilities</b>					
Accounts payable and accrued liabilities	2	700,999	700,999	1,034,213	1,034,213
<b>FVTPL</b>					
Derivative warrant liability	3	4,597,332	4,597,332	-	-

\* The Company has determined that the carrying values of its short-term financial assets and financial liabilities, including cash and accounts payable and accrued liabilities, approximate their fair value due to the short-term nature of the instruments. Information on the fair value of the derivative warrant liability is included in Note 9(g).

There were no transfers for levels of change in the fair value measurements of financial instruments for the years ended December 31, 2021 and 2020.



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:

**XORTX THERAPEUTICS INC.**

**Consolidated Statements of Cash Flows**

**For the years ended December 31, 2021, 2020 and 2019**

**(Expressed in Canadian Dollars)**

**12. Financial instruments and risk management (continued)**

**a) Credit risk**

Credit risk is the risk of financial loss to the Company if a customer or 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, 2021	December 31, 2020
	\$	\$
<b>Cash</b>	18,851,244	171,271

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. The Company's maximum exposure to credit risk as at December 31, 2021 and 2020 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 the financial liabilities are comprised of its accounts payable and accrued liabilities and derivative warrant liability.

The contractual maturities of these financial liabilities as at December 31, 2021 and 2020 are summarized below:

	Payments due by period as of December 31, 2021			
	Total	Less than 3 months	Between 3 months and 1 year	1-3 years
	\$	\$	\$	\$
Accounts payable and accrued liabilities	700,999	700,999	-	-
	700,999	700,999	-	-
	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	-	-

**XORTX THERAPEUTICS INC.**

**Consolidated Statements of Cash Flows**

**For the years ended December 31, 2021, 2020 and 2019**

**(Expressed in Canadian Dollars)**

**12. Financial instruments and risk management (continued)**

**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

As at December 31, 2021, the Company is exposed to currency risk on the following financial assets and liabilities denominated in US Dollars (“USD”) and British Pounds (“GBP”). The sensitivity of the Company’s net earnings due to changes in the exchange rate between the USD and GBP against the Canadian dollar is included in the table below in Canadian dollar equivalents:

	USD amount	GBP amount	Total
	\$	\$	\$
Cash	13,813,058	-	13,813,058
Accounts payable and accrued liabilities	(76,178)	(143,900)	(220,078)
<b>Net exposure</b>	<b>13,736,880</b>	<b>(143,900)</b>	<b>13,592,980</b>
<b>Effect of +/- 10% change in currency</b>	<b>1,373,688</b>	<b>(14,390)</b>	

## iii) Other price risk

Other price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in market prices, other than those arising from interest rate risk or foreign currency risk. The Company’s derivative warrant liability is subject to price risks associated with the Company’s share price in the future. A 10% increase in the Company’s share price would have decreased the Company’s net loss and comprehensive loss by \$116,000 due to the impact of the share price on the fair value of the financial instrument.

## 13. Capital management

The Company defines capital that it manages as shareholders’ equity. 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, 2021. The Company is not exposed to external requirements by regulatory agencies regarding its capital.

## XORTX THERAPEUTICS INC.

### Consolidated Statements of Cash Flows

For the years ended December 31, 2021, 2020 and 2019

(Expressed in Canadian Dollars)

## 14. Commitments

The Company has long-term arrangements with commitments that are not recognized as liabilities as at December 31, 2021 and 2020 as follows:

### a) Employment Agreement

	December 31 2021	December 31 2020
	\$	\$
Management services – officers	380,000	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, 2021, equated to US\$300,000.

### b) Payments

In the normal course of business, the Company has committed to payments totaling \$1,613,142 (2020 - \$Nil) for activities related to its clinical trial, manufacturing, collaboration programs and other regular business activities which are expected to occur over the next two years.

## 15. Segmented information

The Company operates in one reportable operating segment, being the development and commercialization of therapies to treat progressive kidney disease. As the operations comprise a single reporting segment, amounts disclosed also represent segment amounts. All long-term assets of the Company are located in Canada.

**XORTX THERAPEUTICS INC.**  
**Management Discussion and Analysis**  
**For the year ended December 31, 2021**

This management discussion and analysis of financial position and results of operations (“MD&A”) is prepared as at April 12, 2022 and should be read in conjunction with the audited consolidated financial statements and related notes thereto of XORTX Therapeutics Inc. (the “Company” or “XORTX”) for the year ended December 31, 2021, which have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”) and interpretations of the International Financial Reporting Interpretations Committee (“IFRIC”). All dollar amounts included therein and in the following MD&A are expressed in Canadian dollars except where noted.

In this discussion, unless the context requires otherwise, references to “we” or “our” are references to XORTX Therapeutics Inc.

## CORPORATE INFORMATION

XORTX was incorporated under the laws of Alberta, Canada on August 24, 2012, under the name ReVasCor Inc. and 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., 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. The Company’s principal executive offices are located at Suite 4000, 421 – 7th Avenue SW, Calgary, Alberta, Canada T2P 4K9. The Company’s shares trade on the TSX Venture Exchange (“TSXV”), on the Nasdaq Stock Exchange (“Nasdaq”) under the symbol “XRTX”, and on the Börse Frankfurt under the symbol “ANU”.

## FORWARD LOOKING STATEMENTS

This MD&A contains certain statements, other than statements of historical fact that are forward-looking statements, which reflect the current view of the Company with respect to future events including corporate developments, financial performance and general economic conditions which may affect the Company.

All statements other than statements of historical fact contained in this MD&A, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

The words “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, among other things, 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 XORLO and any other product candidates we may develop, and the labeling under any approval we may obtain;
- regulatory approvals and other regulatory developments in the United States and other countries;
- the performance of third-party manufacturers and contract research organizations;
- 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.

XORTX relies on certain key expectations and assumptions in making the forecasts, projections, predictions or estimations set out in forward-looking information. These factors and assumptions are based on information available at the time that the forward-looking information is provided. These include, but are not limited to, expectations and assumptions concerning:

- the availability of capital to fund planned expenditures;
- prevailing regulatory, tax and environmental laws and regulations; and
- the ability to secure necessary personnel, equipment and services.

Undue reliance should not be placed on forward-looking information because a number of risks and factors may cause actual results to differ materially from those set out in such forward-looking information. These include:

- incorrect assessments of the value of acquisitions, licenses and development programs;
- technical, manufacturing and processing problems;
- actions by governmental authorities, including increases in taxes;
- the availability of capital on acceptable terms;
- fluctuations in foreign exchange, currency, or interest rates and stock market volatility;
- failure to realize the anticipated benefits from licenses or acquisitions;
- the other factors specifically identified as risk factors in this MD&A; and
- potential labour unrest.

Readers are cautioned that the foregoing list of factors should not be construed as exhaustive. Further information relating to risks is included in this MD&A under Risks Related to the Business.

Except as may be required by applicable law or stock exchange regulation, XORTX undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events. Accordingly, readers should not place

undue reliance on forward-looking statements. If XORTX does update one or more forward-looking statements, no inference should be drawn that additional updates will be made with respect to those or other forward-looking statements. Additional information relating to the Company is available by accessing the SEDAR website at [www.sedar.com](http://www.sedar.com).

## BUSINESS OVERVIEW

XORTX 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 in orphan (rare) disease indications such as autosomal dominant polycystic kidney disease (“ADPKD”) and larger, more prevalent type 2 diabetic nephropathy (“T2DN”) as well as acute kidney injury (“AKI”) due to coronavirus infection.

Our focus is on developing three therapeutic products to:

- 1/ slow or reverse the progression of chronic kidney disease in patients at risk of end stage kidney failure;
- 2/ address the immediate need of individuals facing coronavirus induced AKI; and
- 3/ the identification of other opportunities where our existing and new intellectual property can be leveraged to address health issues.

2



We believe that our technology is underpinned by well-established research and insights into the underlying biology of aberrant purine metabolism, its health consequences and of oxypurinol, a uric acid lowering agent that works by effectively inhibiting xanthine oxidase. We develop therapeutic products that include new or existing drugs that can be adapted to address different disease indications where aberrant purine metabolism and/or elevated uric acid is a common denominator, including polycystic kidney disease, pre-diabetes, insulin resistance, metabolic syndrome, diabetes, diabetic nephropathy, and infection. We are focused on building a pipeline of assets to address the unmet medical needs for patients with a variety of serious or life-threatening diseases using our innovative formulation of 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,

Our three lead product candidates are XRx-008, for the treatment of ADPKD; XRx-101, to treat AKI associated with Coronavirus / COVID-19 infection, AKI and associated health consequences; and XRx-225, for the treatment of T2DN. At XORTX; 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 modulating aberrant purine and uric acid metabolism, including 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 indications 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 a 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 at a low level during viral infection and target management of acute organ injury. 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, our XRx-225 product candidate program, some of the intellectual property for which we license from third parties, represents a potential new class of xanthine oxidase inhibitor(s) with a targeted design to enhance 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.

3



#### 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 large scale and high purity active pharmaceutical drug product. We believe this will provide a 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 product candidates to treat the symptoms of, and potentially delay the progression of ADPKD, AKI due to COVID-19 infection, and T2DN. We note that there is no guarantee that the FDA will approve our proposed uric acid lowering agent products for the treatment of kidney disease or the health consequences of diabetes.

#### Product Candidate Pipeline

Our lead product candidates are XRx-008, XRx-101, and XRx-225. The XRx-008 program is currently screening subjects for bridging pharmacokinetic characterization before initiating a Phase 3 registration clinical trial, the last stage of clinical development before United States Food and Drug Administration (“FDA”) approval. Similarly, a second “pharmacokinetic” study is planned to support both the XRx-008 and XRx-101 program and future late-stage clinical studies targeting attenuation or reversal of acute kidney disease in hospitalized individuals with COVID-19. XRx-225 is at the non-clinical stage and advancing toward the clinical development stage.

## Products

The Company’s most advanced development program, XRx-008, is 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. This proprietary formulation of oxypurinol has shown increased oral bioavailability and the potential for an enhanced therapeutic range. XORTX is also developing a second oral formulation of oxypurinol, XRx-101, for use in treating patients with AKI due to respiratory virus infection and/or associated co-morbidities including sepsis.

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 is the exclusive licensee of two U.S. granted patents with claims to the use of all uric acid lowering agents to treat insulin resistance or diabetic nephropathy. Counterparts for some of these patent applications have also been submitted in Europe. In both the US and Europe, XORTX has been granted patents for unique proprietary formulations of xanthine oxidase inhibitors. In addition, XORTX has also submitted two patent applications to cover the use of uric acid lowering agents for the treatment of the health consequences of coronavirus infection, as well as a new provisional patent for novel therapeutics to treat polycystic kidney disease.

## OUR STRATEGY

The Company’s 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.

Our ability to implement our business strategy is subject to numerous risks.

4



These risks include, among others (see “Risks Related to the Business”):

- 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 alter, 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 of 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;
- the 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.

## Funding Requirements

The Company has not generated any revenue from product sales to date and does not expect to do so until such time as XORTX obtains regulatory approval for and commercializes one or more of our product candidates. As the Company is 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 also expect to continue our strategic partnerships and we continue to seek additional collaboration opportunities. Further, we 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, the Company anticipates that our existing cash and cash equivalents as of December 31, 2021, combined with the net proceeds of future financings, will enable us to advance the clinical development of XRx-008 and XRx-101 product candidates. XORTX may also be eligible to receive certain research, development and commercial milestone payments in the future. 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.

5



## RECENT DEVELOPMENTS

### Consolidation and Exchange Uplistings

On September 20, 2021, the Company announced that further to receipt of shareholder approval at the special meeting of shareholders held September 2, 2021 (announced on August 13, 2021), the Company would complete a share consolidation of the issued and outstanding common shares of the Company on the basis of 11.74 pre-consolidation common shares for each one (1) post-consolidation common share. On September 24, 2021, the share consolidation was affected resulting in consolidated shares outstanding on that date of 9,528,687.

On October 13, 2021, the Company announced that it had received approval to list its common shares on the Nasdaq under the symbol "XRTX".

On November 2, 2021, the Company announced that it had received final approval to list its common shares on the TSXV under the symbol "XRTX". The Company's shares were de-listed from trading on the Canadian Securities Exchange effective November 4, 2021 and trading on the TSXV commenced on November 5, 2021.

### Public Offering and Private Placement

On October 15, 2021, the Company closed an underwritten public offering in the U.S. of 2,906,000 units, with each unit consisting of one common share and one warrant to purchase one common share at US\$4.13 per unit, for aggregate gross proceeds of approximately US\$12 million, prior to deducting underwriting discounts and other offering expenses (the "US IPO Offering"). The USD IPO Offering was undertaken by A.G.P. / Alliance Global Partners ("A.G.P.") who acted as sole book-running manager. The warrants are exercisable at US\$4.77 per share and have a term of five years. In addition, the Company granted A.G.P. a 45-day option to purchase up to an additional 435,900 common shares and warrants to purchase up to an additional 435,900 common shares at US\$4.13 less underwriting discounts. On closing, A.G.P. exercised its option to purchase additional warrants to purchase up to an additional 435,900 common shares. On November 8, 2021, A.G.P. partially exercised its 45-day option to purchase 355,000 common shares at US\$4.13 per share, resulting in additional gross proceeds to the Company of approximately US\$1.47 million which increased the US IPO Offering to 3,261,000 common shares and 3,341,900 warrants.

In January and February 2021, 350,204 warrants that were issued in connection with the February 2020 private placement were exercised. Of the warrants exercised, 339,801 were exercised at \$2.94 per common share and 10,703 were exercised at \$1.64 per common share in respect to certain finder's warrants that were issued in relation to that private placement.

On February 9, 2021, the Company closed a private placement with the issuance of 2,085,687 units at a subscription price of \$2.935 per unit for gross proceeds of \$6,121,572 (the "Private Placement"). 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 \$4.70 for a period of five 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 is greater than \$14.09 (adjusted to reflect the share consolidation of 11.74:1 effected on September 24, 2021) for 10 or more consecutive trading days, the warrants will be accelerated upon notice and the warrants will expire on the 30<sup>th</sup> calendar day following the date of such notice. In addition, the warrants were also subject to a ratchet provision that provided for an adjustment in the exercise price in the event the Company issued or sold 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 would be amended to match such lower price. With the US IPO Offering being undertaken at a higher price than the Private Placement, the ratchet provision terminated on October 15, 2021.



In connection with the Private Placement, the Company paid \$116,216 in cash commissions and issued 58,288 finders' warrants. Each finders' warrant is exercisable into one common share at a price of \$4.70 and having the same expiry, acceleration and anti-dilution provisions as the warrants included in the Private Placement.

### Patent Advancements

On December 29, 2020, the Company announced the receipt of notification that the patent "Formulations of Xanthine Oxidase Inhibitors" will be granted for XR<sub>x</sub>-225 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. On September 1, 2021, the Company announced the grant of the patent titled "EPO National Stage of PCT International Application for Compositions and Methods for Treatment and Prevention of Hyperuricemia Related Health Consequences".

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 XR<sub>x</sub>-101 (we believe a novel formulation of oxypurinol), to treat respiratory, kidney disease and multi-organ injury related to patients infected with SARS-COV-2 or other respiratory viruses COVID-19.

On December 20, 2021, the Company filed a provisional patent for polycystic kidney disease entitled "Compositions and Methods for Diagnosis, Treatment of and Prevention of Kidney Disease". This provisional patent filing was based upon findings of two independent investigator led studies that: (1) studied the role of aberrant purine metabolism in ADPKD kidney tissue, the results showing that xanthine oxidase enzyme expression and activity in kidney tissue in ADPKD is increased substantially and significantly, potentially revealing a new mechanism of injury in ADPKD; and (2) explored the health consequences of high uric acid in a mouse model of autosomal dominant polycystic kidney disease that successfully demonstrated that increased levels of serum uric acid can accelerate structural and functional changes in kidneys of patients with ADPKD.

On March 23, 2022, the Company announced the submission of a Patent Cooperation Treaty ("PCT") patent application seeking international patent protection for the patent entitled "Compositions and Methods for Enhancing Anti-Viral Therapies". This patent is based on retrospective clinical data from XORTX scientific partners suggesting that an important therapeutic opportunity lies with addressing aberrant purine metabolism combined with hyperuricemia in patients most at risk to severe COVID-19 outcome. Since the advent of COVID-19 and during 2020, accumulating evidence suggests that individuals most at risk for more severe health consequences fall within a group that includes individuals with obesity, hypertension, metabolic syndrome, insulin resistance, pre-diabetes, diabetes or chronic kidney disease have a higher incidence of hyperuricemia and endothelial dysfunction. Low grade systemic inflammation associated with these disease states and pre-existing vascular injury may suppress an individual's ability to respond with a sufficiently robust response to fight infection and leaves the individual more prone to excessive pro-inflammatory and pro-coagulative state. This new patent filing proposes compositions and methods for enhancing anti-viral therapies for the treatment of individuals most at risk.

On April 7, 2022, the Company announced receipt of notification that the patent "Formulations of Xanthine Oxidase Inhibitors" will be granted by the United States Patent Office. The patent covers compositions for, and methods of using XORTX's proprietary formulations of xanthine oxidase inhibitors for renal and other diseases where aberrant purine metabolism has been implicated in disease progression.



### Regulatory Advancements

On March 14, 2022, the Company announced the submission of its clinical trial application (“CTA”) with Health Canada for a XR-008 bridging pharmacokinetics study. The study is an important first clinical step in the Company’s 505(b)2 clinical and regulatory plan for 2022 and will support the XR-008 program for ADPKD as well as the planned phase 3 registration trial.

On March 31, 2022, the Company announced the filing of an IND application with the FDA. This IND filing is in support of the Company’s XR-008 program for treatment of progressing kidney disease due to ADPKD and contains the protocol for the bridging pharmacokinetics study – XR-008 discussed below.

On April 12, 2022, the Company announced receipt of a no objection letter from Health Canada regarding the Company’s upcoming XR-008 clinical bridging pharmacokinetics study. The XR-008 study has been designed with three important objectives: 1) to determine which of XORTX’s novel formulations results in the best circulating oxypurinol concentrations; 2) to determine the effect of food on the bioavailability of this formulation; and 3) to determine the safety and pharmacokinetics of multiple doses of this selected formulation. Knowledge gained during the conduct of this trial will provide guidance regarding the future oral dosing of oxypurinol formulations in support of the Company’s planned phase 3 registration trial in ADPKD. Additionally, this study will provide data to support future New Drug Application (“NDA”) marketing submissions to the FDA and the European Medicines Agency (“EMA”).

### 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. 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 suggest 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 are warranted, and may improve AKI, dialysis, recovery and mortality outcomes.

On October 14, 2021, the Company announced that the results of the study provide support for the Company’s provisional patent applications for XR-101 with the conclusion of the study indicating, *“In patients admitted to the hospital for COVID-19, higher uric acid levels were independently associated with major adverse kidney events and mortality in a dose-dependent manner. In addition, hyperuricemia was associated with higher procalcitonin and troponin levels.”*

### 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 XR-008 and XR-101 clinical trial programs. The launch of oxypurinol manufacturing for both XR-008 and XR-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.

### Appointment of Altasciences as Contract Research Organization

On December 2, 2021, the Company announced the appointment of Altasciences Company Ltd., a contract research organization (“CRO”) for its planned Bridging pharmacokinetic study in support of the XR-008 program for ADPKD and XR-101 for AKI associated with Coronavirus / COVID-19 infection. The goal of the planned bridging pharmacokinetics study – XR-008, is to characterize the increased bioavailability of oxypurinol in humans and follows successful results in two animal models where increased bioavailability was demonstrated for this formulation.



### Changes in officers, directors and advisory board members

On May 12, 2021, William Farley was appointed to the Board of Directors of the Company.

On June 16, 2021, Jacqueline Le Saux was appointed to the Board of Directors to replace Allan Williams who resigned effective that date.

On July 1, 2021, Stephen Haworth was appointed as the Chief Medical Officer of the Company.

On July 14, 2021, Amar Keshri was appointed as Chief Financial Officer to replace James Fairbairn.

On August 31, 2021, the Company announced the appointment of Dr. Charles Edelstein to the Company’s clinical advisory board.

On December 20, 2021, Raymond Pratt was elected to the Board of Directors to replace Bruce Rowlands who resigned effective that date.

On January 20, 2022, the Company announced the appointment of Dr. David MacDonald as Chief Technology Officer.

### FUTURE PLANS AND OUTLOOK

XORTX intends to grow its business by developing three programs focused on kidney disease.

For the balance of 2022, the Company anticipates a number of advancements and changes in its business.

In 2022, XORTX is focused on advancing XR-008 into a clinical trial, the submission of an Orphan Drug Designation application, initiation of special protocol assessment

discussions with the FDA and continuing formulation development for other kidney disease applications. To achieve these objectives, XORTX's action plan includes:

1. **Initiate XRX-OXY-101 Bridging Study.** This study is a three-part, single-dose; fed or fasted; then, multi-dose crossover comparative bioavailability and pharmacokinetic study in healthy volunteers. It is designed to permit XORTX to characterize the safety and relative bioavailability of the XRX-008 formulation. Knowledge gained during the conduct of this trial will provide guidance regarding the oral dose of XRX-008 for our planned registration trial in ADPKD. Additionally, this study will provide data to support future NDA submissions to the FDA and the EMA. This study is planned to start in the second quarter of 2022.
2. **Initiate XRX-OXY-102 Bridging Study.** This study is a multi-dose crossover comparative bioavailability and pharmacokinetic study in healthy volunteers. It is designed to permit XORTX to characterize the safety and relative bioavailability of the XRX-101 formulation options. Knowledge gained during the conduct of this trial will provide guidance regarding the oral dose of XRX-101 for future clinical and commercial planning. Additionally, this study will provide data to support future NDA submissions to the FDA and EMA. This study is planned to start in the second quarter of 2022.
3. **Complete Orphan Drug Designation.** Current research being conducted will be used to file for orphan drug designation in 2022.
4. **Commence XRX-OXY-301 Registration trial in ADPKD.** XRX-OXY-301 is a multi-site, multi-national, placebo controlled, study in ADPKD patients with progressing stage 2 or 3 kidney disease. The objective of this study is to evaluate the safety and effectiveness of XRX-008 over a 24-month period and study the ability of xanthine oxidase inhibition to decrease the rate of decline of glomerular filtration rate. An estimated 350 patients will be enrolled. This study is planned to start in the second half of 2022, subject to SPA negotiations with the FDA.

9



5. **Ongoing CMC Work.** In parallel to the XRX-OXY-101 and XRX-OXY-102 studies, XORTX will be focused on performing the necessary scale-up, process validation and stability as part of the CMC requirements for the filing of the IND, as well as future clinical and commercial supplies. All development will be performed according to current GMP methodology. This work will be ongoing throughout 2022 and 2023.
6. **Preparation of 505(b)(2) IND.** In parallel with initiation of XRX-OXY-101 a 505(b)2 based IND is expected to be submitted in the second quarter of 2022 for the XRX-008 program.
7. **Activities Related to Potential Commercial Launch.** In preparation for a possible NDA filing in 2025 in the U.S. for XRX-008, XORTX is planning to conduct additional commercialization studies, including nephrologist, patient, payer, pricing and/or reimbursement studies, as well as product brand name selection and filings, and plans for launch. This work will be ongoing from 2022 to 2025.
8. **Activities Related to European Registration.** XORTX intends to establish guidance from the European Union for path to approval in the European Union, including required clinical studies and reimbursement conditions. This work will be ongoing from 2022 to 2025.

To achieve the above goals, XORTX will continue to pursue non-dilutive and dilutive funding and expand discussions to partner with major pharma / biotech companies with a global reach. XORTX will also increase financial and healthcare conference participation to further strengthen and expand our investor base.

## SUMMARY OF QUARTERLY RESULTS

The table below sets forth unaudited quarterly results prepared by management for the eight previous quarters to December 31, 2021:

(unaudited)	2021 Q4	2021 Q3	2021 Q2	2021 Q1
Amortization of Intangible Assets	4,739	4,526	4,373	4,244
Foreign Exchange (gain) loss	(346,716)	12,242	7,336	387
Consulting	368,662	109,269	94,480	151,861
Directors' fees	22,700	39,500	-	-
General and administrative	146,012	6,263	13,012	10,812
Interest	1,669	1,382	665	1,882
Investor Relations	134,543	118,947	60,251	204,874
Listing fees	148,487	36,858	36,903	14,553
Professional Fees	71,246	(402,676)	491,552	112,821
Research and Development	430,948	381,967	26,423	13,786
Share Based Payments <sup>2</sup>	143,496	62,221	90,451	202,990
Travel	239	-	-	2,100
Wages and Benefits	137,678	48,000	48,000	52,412
Transaction costs on derivative warrant liability	1,537,948	-	-	85,732
(Gain) loss on derivative warrant liability	(11,895,882)	7,936,114	(655,000)	1,315,000
Total Comprehensive Income (loss)	9,094,231	(8,354,613)	(218,446)	(2,173,454)
Earnings (loss) per Share	0.74	(0.89)	(0.02)	(0.26)

10



(unaudited)	2020 Q4	2020 Q3	2020 Q2	2020 Q1
Accretion	-	-	425	421
Amortization of Intangible Assets	5,140	5,154	5,095	5,050
Foreign Exchange loss (gain)	7,006	42,230	90,907	(143,104)
Consulting	39,172	15,000	33,708	15,000



General and administrative	1,933	1,742	3,445	2,396
Interest	815	839	2,525	8,487
Investor Relations	109,973	52,848	40,081	38,275
Listing fees	15,510	10,802	14,063	11,763
Professional Fees	75,000	37,819	22,785	26,976
Research and Development	142,548	120,033	12,452	2,422
Share Based Payments <sup>2</sup>	6,748	90,443	189,524	6,728
Travel	-	-	-	8,460
Wages and Benefits	79,808	48,000	49,740	50,357
Impairment of intangible assets	64,562	-	-	-
Recovery of provision for patent acquisition <sup>1</sup>	(95,490)	-	-	-
Forgiveness of debt	-	-	(91,014)	-
Total Comprehensive Loss	(452,725)	(424,910)	(373,736)	(33,231)
Loss per Share	(0.07)	(0.06)	(0.05)	(0.01)

Notes:

(1) The provision for patent acquisition relates to a patent rights acquisition of US\$75,000 paid in 2012. During the year ended December 31, 2020, the Company determined that the purchase was no longer feasible; therefore, the provision was reversed.

(2) Share based payments relate to the vesting of options over the period.

### Three months ended December 31, 2021

The Company earned comprehensive income of \$9,094,231 (\$0.22 per share) for the three months ended December 31, 2021, compared to a loss of \$452,725 (\$0.07 per share) in the three months ended December 31, 2020.

Variances within the loss items are as follows:

**Foreign Exchange (Gain) Loss** - \$(346,716) (2020 - \$7,006) – Our foreign exchange gain was \$346,716 for the three months ended December 31, 2021 as compared to loss of \$7,006 primarily due to an unrealized translation gain on the U.S. dollar denominated cash balance.

**Consulting** - \$368,662 (2020 - \$39,172) – Consulting expenses increased during the three months ended December 31, 2021, as more consultants were engaged during 2021 due to an increase in Company activity with respect to corporate development.

**Directors' fees** - \$22,700 (2020 - \$nil) – Directors' fees expenses increased during the three months ended December 31, 2021, as the Company began paying annual and meeting fees to its independent directors on July 1, 2021.

**General and administrative** - \$146,012 (2020 - \$1,933) General and administrative costs increased significantly mostly due to an increase in the director and officer insurance premium.

**Listing fees** - \$148,487 (2020 - \$15,510) – Listing fees increased during the three months ended December 31, 2021 due to costs related to the Company's listings on the TSXV and Nasdaq stock exchanges.

**Research and development** - \$430,948 (2020 - \$142,548) – Research and development expenses increased in the three months ended December 31, 2021, as the result of commencement of various feasibility studies.



**Share-based payments** - \$143,496 (2020 - \$6,748) – The share-based payment expense increased in the three months ended December 31, 2021, as more options were granted that vested over the period.

**Gain on derivative warrant liability** - \$11,895,882 (2020 - nil). This gain relates to the warrants included in the units issued under the Private Placement and IPO. The Private Placement warrants were classified as a derivative financial liability as they contained a ratchet provision that provided for an adjustment in the exercise price of the warrants if shares or securities convertible to shares were sold at a price lower than the exercise price. The IPO warrants have an exercise price in US dollars and have a derivative financial liability as the exercise price is in a different currency than the functional currency of the entity. The warrants are initially recognized at fair value and subsequently measured at fair value with changes recognized through profit or loss. Of this amount, a gain of \$9,068,213 relates to the Private Placement warrants and was recognized as the ratchet provision on the warrants described above ended, thereby resulting in the derecognition of the derivative warrant liability during the quarter. A gain of \$2,827,669 relates to the IPO warrants and the derivative liability recognized. Gains and losses resulting from the revaluation of the derivative warrants are non-cash and do not impact our cash flows.

### Selected Annual Financial Information

The financial information reported here in has been prepared in accordance with IFRS. The Company uses the Canadian dollar as its presentation currency. The following table represents selected financial information for the Company's fiscal years 2021, 2020, and 2019.

#### Selected Statement of Operations Data

	2021	2020	2019
Revenue	\$Nil	\$Nil	\$Nil
Comprehensive loss for the year	\$ 1,652,282	\$ 1,284,602	\$ 629,576
Weighted average shares outstanding	9,847,641	6,664,025	5,359,429
Loss per share, basic and diluted	\$ 0.17	\$ 0.19	\$ 0.12

#### Selected Statement of Financial Position Data

	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2019
Cash and cash equivalents	\$ 18,851,244	\$ 171,271	\$ 58,614
Net working capital (deficiency)	\$ 19,472,340	\$ 1,021,928	\$ (484,450)

Total assets	\$	22,035,902	\$	2,290,457	\$	1,087,977
Long-term liabilities		\$Nil		\$Nil		\$Nil



## Comparison of Operations for the 2021 and 2020 Financial Years

### Results of Operations

	2021	2020	Change \$	Change %
Amortization	17,882	20,439	(2,557)	(13%)
Consulting	724,272	102,880	621,392	604%
Directors' fees	62,200	-	62,200	-
General and administrative	176,099	9,516	166,583	1751%
Investor relations	518,615	241,177	277,438	115%
Listing fees	236,801	52,138	184,663	354%
Professional fees	272,943	162,580	110,363	68%
Research and development	853,124	277,455	575,669	207%
Share-based payments	499,158	293,443	205,715	70%
Travel	2,339	8,460	(6,121)	(72%)
Wages and benefits	286,090	227,905	58,185	26%
Accretion	-	846	(846)	(100%)
Foreign exchange (gain)	(326,751)	(2,961)	(323,790)	10935%
Gain on derivative warrant liability	(3,299,768)	-	(3,299,768)	-
Interest and other expenses	5,598	12,666	(7,068)	(56%)
Impairment of intangible assets	-	64,562	(64,562)	(100%)
Recovery of provision	-	(95,490)	95,490	(100%)
Transaction costs on derivativewarrant liability	1,623,680	-	1,623,680	-
Forgiveness of debt	-	(91,014)	91,014	(100%)
Comprehensive Loss for the Year	1,652,282	1,284,602	367,680	29%
Loss per Share	0.17	0.19	0.53	289%

### Comparison of cash flows for the year ended December 31, 2021

The Company realized a net cash inflow of \$18,679,973 for the year ended December 31, 2021, compared to \$112,657 for the year ended December 31, 2020. The variances in the cash flow for the year ended December 31, 2021, compared to December 31, 2020, were as follows:

**Operating activities** – Cash used in operating activities for the year ended December 31, 2021, was \$6,062,510 (2020 - \$728,401). The cash used in operating activities was primarily due to the net loss during the period offset by the non-cash items.

**Investing activities** – Cash used in investing activities for the year ended December 31, 2021, was \$39,809 (2020 - \$14,350). The cash used related to the acquisition of intangible assets during the period.

**Financing activities** – Cash provided by financing activities in the year ended December 31, 2021, was \$24,456,551 (2020 - \$855,408). The cash provided was mostly related to the public offering that occurred when the shares of the Company were listed on Nasdaq of 2,906,000 units, with each unit consisting of one common share, no par value, and one warrant to purchase one common share at a public offering price of US\$4.13 per Unit, for gross proceeds of \$14,851,850 (US\$12,001,780) as well as the private placement that took place in February 2021 raising gross proceeds of \$6,121,572 through the issuance of 2,085,687 units at a subscription price of \$2.935 per unit.



## LIQUIDITY AND CAPITAL RESOURCES

As at December 31, 2021, the Company had a cash balance of \$18,851,244 and working capital of \$19,472,340 as compared to a cash balance of \$171,271 and working capital of \$1,021,928 as at December 31, 2020. During the year ended December 31, 2020, the Company closed a \$2,556,320 private placement and during the year ended December 31, 2021, the Company closed a public offering that occurred when the shares of the Company were listed on Nasdaq of 2,906,000 units, with each unit consisting of one common share, no par value, and one warrant to purchase one common share at a public offering price of US\$4.13 per Unit, for gross proceeds of \$14,851,850 (US\$12,001,780) as well as the private placement that took place in February 2021 raising gross proceeds of \$6,121,572 through the issuance of 2,085,687 units at a subscription price of \$2.935 per unit. The Company's primary source of funding is by way of raising capital through the issuance of equity to third party investors.

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, corporate initiatives may be affected or postponed.

## COMMITMENTS

The Company has long-term arrangements with commitments as at December 31, 2021 and 2020 as follows:

	December 31 2021	December 31 2020
	\$	\$
Management services – officers	380,000	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, 2021, equated to US\$300,000.

#### OFF BALANCE SHEET ARRANGEMENTS

The Company has no off-balance sheet arrangements.

#### TRANSACTIONS WITH RELATED PARTIES

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.

During the year ended December 31, 2021, the Company incurred the following transactions with related parties:

- a) Wages and benefits were paid or accrued to officers of the Company in the amount of \$278,840 (2020 - \$196,097).
- b) Professional fees were paid or accrued to a former officer of the Company in the amount of \$58,500 (2020 - \$30,000).

14



- c) Professional fees were paid or accrued to an officer of the Company in the amount of \$53,000 (2020 - \$nil).
- d) Research and development fees were paid or accrued to an officer of the Company in the amount of \$106,366 (2020 - \$nil).
- e) Consulting fees were accrued to directors of the Company in the amount of \$34,950 and directors' fees (2020 - \$36,000) were accrued to the directors of the Company in the amount of \$62,200 (2020 - \$nil).
- f) As at December 31, 2021, \$nil (2020 - \$52,450) was payable to the former Chief Financial Officer (**CFO**) of the Company for CFO services, and \$81,104 (2020 - \$20,340) was payable to directors of the Company, \$25,000 (2020 - \$518,084) was accrued to the Chief Executive Officer (**CEO**) of the Company, for CEO services, and \$47,543 (2020 - \$nil) was accrued to the Chief Medical Officer (**CMO**) of the Company, for consulting services. The balances are unsecured, non-interest bearing, and have no fixed terms of repayment.
- g) Management compensation transactions for the year ended December 31, 2021 and 2020 are summarized as follows:

	Short-term employee benefits	Share-based payments	Total
	\$	\$	\$
Year ended December 31, 2020			
Directors and officers	262,097	217,816	479,913
Year ended December 31, 2021			
Directors and officers	593,856	331,809	925,665

#### FINANCIAL AND CAPITAL RISK MANAGEMENT

The Company's financial instruments consist of cash, accounts payable and accrued liabilities, and warrant liability. 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, 2021, 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, 2021 and 2020 and categorized into levels of the fair value hierarchy:

	Level	December 31, 2021		December 31, 2020	
		Carrying Value	Estimated Fair Value *	Carrying Value	Estimated Fair Value *
		\$	\$	\$	\$
<b>FVTPL</b>					
Cash	1	18,851,244	18,851,244	171,271	171,271
<b>Other financial liabilities</b>					
Accounts payable and accrued liabilities	2	700,999	700,999	1,034,213	1,034,213
<b>FVTPL</b>					
Derivative liability	3	4,597,332	4,597,332	-	-

\* The Company has determined that the carrying values of its short-term financial assets and financial liabilities, including cash and accounts payable and accrued liabilities approximate their fair value due to the short-term nature of the instruments. The fair value of the derivative warrant liability is revalued at the end of each period.

There were no transfers for levels of change in the fair value measurements of financial instruments for the years ended December 31, 2021 and 2020.

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, 2021	December 31, 2020
	\$	\$
<b>Cash</b>	18,851,244	171,271

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. The Company's maximum exposure to credit risk as at December 31, 2021 and 2020 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, 2021 and 2020 are summarized below:

	Payments due by period as of December 31, 2021			
	Total	Less than 3 months	Between 3 months and 1 year	1-3 years
Accounts payable and accrued liabilities	700,999	700,999	-	-
	700,999	700,999	-	-
	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	-	-

**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**

As at December 31, 2021, the Company is exposed to currency risk on the following financial assets and liabilities denominated in US Dollars ("USD") and British Pounds ("GBP"). The sensitivity of the Company's net earnings due to changes in the exchange rate between the USD and GBP against the Canadian dollar is included in the table below in Canadian dollar equivalents:

	USD amount	GBP amount	Total
	\$	\$	\$
Cash	13,813,058	-	13,813,058
Accounts payable and accrued liabilities	(76,178)	(143,900)	(220,078)
<b>Net exposure</b>	13,736,880	(143,900)	13,592,980

<b>Effect of +/- 10% change in currency</b>	1,373,688	(14,390)
---	-----------	----------

## Capital Management

The Company defines capital that it manages as equity. 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.

The Company includes the following items in its managed capital as at the following periods:

<b>Equity is comprised of:</b>	<b>December 31 2021</b>	<b>December 31 2020</b>
	\$	\$
Share capital	20,009,154	8,258,395
Share-based payments, warrant reserve and other	6,386,459	1,003,609
Obligation to issue shares	32,238	32,238
Deficit	(9,690,280)	(8,037,998)

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. The Company is not exposed to external requirements by regulatory agencies regarding its capital.

17



## OUTSTANDING SHARE DATA

As at April 12, 2022, the Company had the following shares outstanding:

- Class	Common Shares
- Authorized	Unlimited, without par value
- Issued and outstanding	12,989,687

## Options Outstanding:

The following table summarizes information on the 606,067 stock options outstanding as at April 12, 2022:

<b>Exercise Price</b>	<b>Number Outstanding</b>	<b>Expiry Date</b>
\$5.87	127,760	March 19, 2023
\$5.87	21,294	November 5, 2023
\$1.64	170,354	June 23, 2025
\$2.82	12,776	August 27, 2025
\$3.29	59,624	January 11, 2026
\$1.88	42,588	May 12, 2026
\$1.76	21,294	June 16, 2026
\$2.41	63,882	July 14, 2026
\$2.54	86,495	December 21, 2026
\$2.54	127,500	January 12, 2027
\$2.54	5,000	February 18, 2027

## Warrants Outstanding:

The following table summarizes information on the 5,329,796 outstanding warrants as at April 12, 2022:

<b>Exercise Price</b>	<b>Number Outstanding</b>	<b>Expiry date</b>
\$4.70	1,842,596	February 9, 2026
US\$4.77	3,487,200	October 15, 2026

## RISKS RELATED TO THE BUSINESS

An investment in the Company is speculative and involves a high degree of risk. Accordingly, prospective investors should carefully consider the specific risk factors set out below, in addition to the other information contained in this MD&A, before making any decision to invest in the Company. The Directors consider the following risks and other factors to be the most significant for potential investors in the Company, but the risks listed do not necessarily comprise all those associated with an investment in the Company and are not set out in any particular order of priority. Additional risks and uncertainties not currently known to the Directors may also have an adverse effect on the Company's business. If any of the following risks actually occur, the Company's business, financial condition, capital resources, results or future operations could be materially adversely affected. In such a case, the price of the common shares could decline, and investors may lose all or part of their investment.

### Speculative Nature of Investment Risk

An investment in the common shares of the Company carries a high degree of risk and should be considered as a speculative investment by purchasers. The Company has limited cash reserves, a limited operating history, has not paid dividends, and is unlikely to pay dividends in the immediate or near future. The Company is in the development stage. Operations are not yet sufficiently established such that the Company can mitigate the risks associated with planned activities.

### **Limited Operating History**

The Company has no present prospect of generating revenue from the sale of products. The Company is therefore subject to many of the risks common to early-stage enterprises, including under-capitalization, cash shortages, limitations with respect to personnel, financial, and other resources and lack of revenues. There is no assurance that the Company will be successful in achieving a return on shareholders' investment and the likelihood of success must be considered in light of the early stage of operations.

### **Negative Cash Flow for the Foreseeable Future**

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.

### **Reliance on Management**

The success of the Company is dependent upon the ability, expertise, judgment, discretion and good faith of its management. While employment agreements are customarily used as a primary method of retaining the services of key employees, these agreements cannot assure the continued services of such employees. Any loss of the services of such individuals could have a material adverse effect on the Company's business, operating results or financial condition.

### **Clinical trials for potential drug candidates will be expensive and time consuming, and their outcomes uncertain.**

Before the Company can obtain regulatory approval for the commercial sale of any drug candidate or attract major pharmaceutical companies with which to collaborate, it will be required to complete extensive clinical trials to demonstrate safety and efficacy. Clinical trials are expensive and are difficult to design and implement. The clinical trial process is also time-consuming and can often be subject to unexpected delays.

The timing and completion of clinical trials may be subject to significant delays relating to various causes, including but not limited to: inability to manufacture or obtain sufficient quantities of materials for use in clinical trials; delays arising from collaborative partnerships; delays in obtaining regulatory approvals to commence a study, or government intervention to suspend or terminate a study; delays, suspensions or termination of clinical trials by the applicable institutional review board or independent ethics board responsible for overseeing the study to protect research subjects; delays in identifying and reaching agreement on acceptable terms with prospective clinical trial sites; slow rates of patient recruitment and enrollment; uncertain dosing issues; inability or unwillingness of medical investigators to follow clinical protocols; variability in the number and types of subjects available for each study and resulting difficulties in identifying and enrolling subjects who meet trial eligibility criteria; scheduling conflicts; difficulty in maintaining contact with subjects after treatment, resulting in incomplete data; unforeseen safety issues or side effects; lack of efficacy during clinical trials; reliance on clinical research organizations to efficiently and properly conduct clinical trials in accord with contracted arrangements and regulations, or other regulatory delays.

### **Risks Related to Food and Drug Administration (FDA) Approval**

In the United States, the FDA regulates the approval of therapeutics and the FDA notification and approval process requires substantial time, effort and financial resources, and the Company cannot be certain that any approvals for its products will be granted on a timely basis, if at all.

Foreign jurisdictions have similar government regulatory bodies and requirements that the Company must meet prior to selling products in those jurisdictions.

The Company must be considered in light of the risks, expenses, shifts, changes and difficulties frequently encountered with companies whose businesses are regulated by various federal, state and local governments. The health care, wellness, workers' compensation and similar companies are subject to a variety of regulatory requirements and the regulatory environment is ever changing particularly with recent legislation, the full impact of which is not yet understood as regulations have not been issued. Failure to follow applicable regulatory requirements will have a materially negative impact on the business of the Company. Furthermore, future changes in legislation cannot be predicted and could irreparably harm the business of the Company.

### **Intellectual Property Rights**

The Company could be adversely affected if it does not adequately protect its intellectual property rights. The Company regards its marks, rights, and trade secrets and other intellectual property rights as critical to its success. To protect its investments and the Company's rights in these various intellectual properties, it may rely on a combination of patents, trademark and copyright law, trade secret protection and confidentiality agreements and other contractual arrangements with its employees, clients, strategic partners, acquisition targets and others to protect proprietary rights. There can be no assurance that the steps taken by the Company to protect proprietary rights will be adequate or that third parties will not infringe or misappropriate the Company's copyrights, trademarks and similar proprietary rights, or that the Company will be able to detect unauthorized use and take appropriate steps to enforce rights. In addition, although the Company believes that its proprietary rights do not infringe on the intellectual property rights of others, there can be no assurance that other parties will not assert infringement claims against the Company. Such claims, even if not meritorious, could result in the expenditure of significant financial and managerial resources.

The Company will rely on trade secrets to protect technology where it does not believe patent protection is appropriate or obtainable. Trade secrets are difficult to protect. While commercially reasonable efforts to protect trade secrets will be used, strategic partners, employees, consultants, contractors or scientific and other advisors may unintentionally or willfully disclose information to competitors.

If the Company is not able to defend patents or trade secrets, then it will not be able to exclude competitors from developing or marketing competing products, and the Company may not generate enough revenue from product sales to justify the cost of development of products and to achieve or maintain profitability.

### **The results of preclinical studies or initial clinical trials are not necessarily predictive of future favorable results.**

Preclinical tests and initial clinical trials are primarily designed to test safety and to understand the side effects of drug candidates and to explore efficacy at various doses and schedules. Success in preclinical or animal studies and early clinical trials does not ensure that later large-scale efficacy trials will be successful nor does it predict final results.

Favorable results in early trials may not be repeated in later ones.

#### **Difficulty to Forecast**

The Company must rely largely on its own market research to forecast sales as detailed forecasts are not generally obtainable from other sources at this early stage of the industry. A failure in the demand for its products to materialize as a result of competition, technological change or other factors could have a material adverse effect on the business, results of operations and financial condition of the Company.

#### **Litigation**

The Company may become party to litigation from time to time in the ordinary course of business which could adversely affect its business. Should any litigation in which the Company becomes involved be determined against the Company such a decision could adversely affect the Company's ability to continue operating and the market price for the Company's common shares. Even if the Company is involved in litigation and wins, litigation can redirect significant Company resources.

20



Commercial success of the Company will depend in part on not infringing upon the patents and proprietary rights of other parties and enforcing its own patents and proprietary rights against others. The research and development programs will be in highly competitive fields in which numerous third parties have issued patents and pending patent applications with claims closely related to the subject matter of the Company's programs. The Company is not currently aware of any litigation or other proceedings or claims by third parties that its technologies or methods infringe on their intellectual property.

While it is the practice of the Company to undertake pre-filing searches and analyses of developing technologies, it cannot guarantee that it has identified every patent or patent application that may be relevant to the research, development, or commercialization of its products. Moreover, it cannot assure that third parties will not assert valid, erroneous, or frivolous patent infringement claims.

#### **Uninsurable Risks**

The business of the Company may not be insurable or the insurance may not be purchased due to high cost. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the Company.

#### **The market price of the Company's common shares may be subject to wide price fluctuations.**

The market price of the Company's common shares may be subject to wide fluctuations in response to many factors, including variations in the operating results of the Company and its subsidiaries, divergence in financial results from analysts' expectations, changes in earnings estimates by stock market analysts, changes in the business prospects for the Company and its subsidiaries, general economic conditions, legislative changes, and other events and factors outside of the Company's control. In addition, stock markets have from time-to-time experienced extreme price and volume fluctuations, which, as well as general economic and political conditions, could adversely affect the market price for the Company's common shares.

#### **Dividends**

The Company has no earnings or dividend record and does not anticipate paying any dividends on the common shares in the foreseeable future.

#### **Dilution**

The financial risk of the Company's future activities will be borne to a significant degree by purchasers of the common shares. If the Company issues common shares from its treasury for financing purposes, control of the Company may change and purchasers may suffer additional dilution.

#### **Rapid Technological Change**

The business of the Company is subject to rapid technological changes. Failure to keep up with such changes may adversely affect the business of the Company. The Company is subject to the risks of companies operating in the medical and healthcare business. The market in which the Company competes is characterized by rapidly changing technology, evolving industry standards, frequent new service and product announcements, introductions and enhancements and changing customer demands. As a result, an investment in the stocks of the Company is highly speculative and is only suitable for investors who recognize the high risks involved and can afford a total loss of investment.

21



#### **Risks Associated with Acquisitions**

If appropriate opportunities present themselves, the Company may acquire businesses, technologies, services or products that the Company believes are strategic. The Company currently has no understandings, commitments or agreements with respect to any other material acquisition and no other material acquisition is currently being pursued. There can be no assurance that the Company will be able to identify, negotiate or finance future acquisitions successfully, or to integrate such acquisitions with its current business. The process of integrating an acquired business, technology, service or product into the Company may result in unforeseen operating difficulties and expenditures and may absorb significant management attention that would otherwise be available for ongoing development of the Company's business. Future acquisitions could result in potentially dilutive issuances of equity securities, the incurrence of debt, contingent liabilities and/or amortization expenses related to goodwill and other intangible assets, which could materially adversely affect the Company's business, results of operations and financial condition. Any such future acquisitions of other businesses, technologies, services or products might require the Company to obtain additional equity or debt financing, which might not be available on terms favorable to the Company, or at all, and such financing, if available, might be dilutive.

## **Economic Environment**

The Company's operations could be affected by the economic context should the unemployment level, interest rates or inflation reach levels that influence consumer trends and consequently, impact the Company's future sales and profitability.

## **Global Economy Risk**

The ongoing economic problems and downturn of global capital markets has generally made the raising of capital by equity or debt financing more difficult. Access to financing has been negatively impacted by the ongoing global economic risks. As such, the Company is subject to liquidity risks in meeting its development and future operating cost requirements in instances where cash positions are unable to be maintained or appropriate financing is unavailable. These factors may impact the Company's ability to raise equity or obtain loans and other credit facilities in the future and on terms favorable to the Company. If uncertain market conditions persist, the Company's ability to raise capital could be jeopardized, which could have an adverse impact on the Company's operations and the trading price of the Company's Shares on the stock exchange.

## **Going-Concern Risk**

The Company's future operations are dependent upon the identification and successful completion of equity or debt financing and the achievement of profitable operations at an indeterminate time in the future. There can be no assurances that the Company will be successful in completing an equity or debt financing or in achieving profitability.

## **Financial Risk Exposures**

The Company may have financial risk exposure to varying degrees relating to the currency of each of the countries where it operates and has financial risk exposure towards digital currencies. The level of the financial risk exposure related to a currency and exchange rate fluctuations will depend on the Company's ability to hedge such risk or use another protection mechanism.

## **Attracting and keeping senior management and key scientific personnel**

The success of the Company depends on the continued ability to attract, retain, and motivate highly qualified management, clinical, and scientific personnel and to develop and maintain important relationships with leading academic institutions, companies, and thought leaders. Allen Davidoff, the Company's Chief Executive Officer and Director, exercises significant control over the day-to-day affairs of the Company. The Company depends on Dr. Davidoff to engage with third parties and contractors to operate the business.

22



---

## **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 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.

## **MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS**

The Company's management is responsible for presentation and preparation of the financial statements and the MD&A. The MD&A have been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators.

The financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. In addition, in preparing the financial information, we must interpret the requirements described above, make determinations as to the relevancy of information included, and make estimates and assumptions that affect reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as anticipated.

23





**FORM 52-109F1 – IPO/RTO**  
**CERTIFICATION OF ANNUAL FILINGS FOLLOWING**  
**AN INITIAL PUBLIC OFFERING, REVERSE TAKEOVER OR**  
**BECOMING A NON-VENTURE ISSUER**

I, Allen Davidoff, Chief Executive Officer of XORTX Therapeutics Inc., certify the following:

1. **Review:** I have reviewed the AIF, if any, annual financial statements and annual MD&A, including, for greater certainty, all documents and information that are incorporated by reference in the AIF (together, the “annual filings”) of XORTX Therapeutics Inc. (the “issuer”) for the financial year ended December 31, 2021.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the annual filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, for the period covered by the annual filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the annual financial statements together with the other financial information included in the annual filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the annual filings.

Date: April 12, 2022.

/s/ Allen Davidoff  
Allen Davidoff  
Chief Executive Officer

-2-

**NOTE TO READER**

In contrast to the usual certificate required for non-venture issuers under National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* (NI 52-109), namely, Form 52-109F1, this Form 52-109F1 - IPO/RTO does not include representations relating to the establishment and maintenance of disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as defined in NI 52-109. In particular, the certifying officers filing this certificate are not making any representations relating to the establishment and maintenance of

- (i) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and
- (ii) a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

The issuer's certifying officers are responsible for ensuring that processes are in place to provide them with sufficient knowledge to support the representations they are making in this certificate.

Investors should be aware that inherent limitations on the ability of certifying officers of an issuer to design and implement on a cost effective basis DC&P and ICFR as defined in NI 52-109 in the first financial period following:

- completion of the issuer's initial public offering in the circumstances described in s. 4.3 of NI 52-109;
- completion of a reverse takeover in the circumstances described in s. 4.4 of NI 52-109; or
- the issuer becoming a non-venture issuer in the circumstances described in s. 4.5 of NI 52-109;

may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.

**FORM 52-109F1 – IPO/RTO**  
**CERTIFICATION OF ANNUAL FILINGS FOLLOWING**  
**AN INITIAL PUBLIC OFFERING, REVERSE TAKEOVER OR**  
**BECOMING A NON-VENTURE ISSUER**

I, Amar Keshri, Chief Financial Officer of XORTX Therapeutics Inc., certify the following:

1. **Review:** I have reviewed the AIF, if any, annual financial statements and annual MD&A, including, for greater certainty, all documents and information that are incorporated by reference in the AIF (together, the “annual filings”) of XORTX Therapeutics Inc. (the “issuer”) for the financial year ended December 31, 2021.
2. **No misrepresentations:** Based on my knowledge, having exercised reasonable diligence, the annual filings do not contain any untrue statement of a material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, for the period covered by the annual filings.
3. **Fair presentation:** Based on my knowledge, having exercised reasonable diligence, the annual financial statements together with the other financial information included in the annual filings fairly present in all material respects the financial condition, financial performance and cash flows of the issuer, as of the date of and for the periods presented in the annual filings.

Date: April 12, 2022.

/s/ Amar Keshri  
Amar Keshri  
Chief Financial Officer

-2-

**NOTE TO READER**

In contrast to the usual certificate required for non-venture issuers under National Instrument 52-109 *Certification of Disclosure in Issuers' Annual and Interim Filings* (NI 52-109), namely, Form 52-109F1, this Form 52-109F1 - IPO/RTO does not include representations relating to the establishment and maintenance of disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR), as defined in NI 52-109. In particular, the certifying officers filing this certificate are not making any representations relating to the establishment and maintenance of

- (i) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and
- (ii) a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP.

The issuer's certifying officers are responsible for ensuring that processes are in place to provide them with sufficient knowledge to support the representations they are making in this certificate.

Investors should be aware that inherent limitations on the ability of certifying officers of an issuer to design and implement on a cost effective basis DC&P and ICFR as defined in NI 52-109 in the first financial period following:

- completion of the issuer's initial public offering in the circumstances described in s. 4.3 of NI 52-109;
- completion of a reverse takeover in the circumstances described in s. 4.4 of NI 52-109; or
- the issuer becoming a non-venture issuer in the circumstances described in s. 4.5 of NI 52-109;

may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.