XORTX THERAPEUTICS INC.
Management Discussion and Analysis
For the year ended December 31, 2018

This management discussion and analysis of financial position and results of operations ("MD&A") is prepared as at April 29, 2019, 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, 2018, 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.

The Company's critical accounting estimates, significant accounting policies and risk factors as disclosed in this MD&A have remained substantially unchanged and are still applicable to the Company unless otherwise indicated.

In this discussion, unless the context requires otherwise, references to "we" or "our" are references to XORTX.

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 listing statement, 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 developments in the United States and other countries;
- the performance of third-party manufacturers;
- our plans to develop and commercialize our product candidates;
- our ability to obtain and maintain intellectual property protection for our product candidates;
- the successful development of our sales and marketing capabilities;
- the potential markets for our product candidates and our ability to serve those markets;
- the rate and degree of market acceptance of any future products;

- the success of competing drugs that are or become available; and
- the loss of key scientific or management personnel.

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.

Except as may be required by applicable law or stock exchange regulation, we undertake 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 we do 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 our Company is available by accessing the SEDAR website at www.sedar.com.

Business Overview

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, larger market type 2 diabetic nephropathy, and fatty liver disease. The Company's current focus is on developing two therapeutic programs to slow and/or reverse the progression of kidney disease in patients at risk of end stage kidney failure.

The primary development program for XORTX is at a late clinical stage and is focused on demonstrating the effectiveness and potential of a first-in-class therapy for autosomal dominant polycystic kidney disease ("**ADPKD**"), an orphan disease. XORTX has a second, clinical stage program that is currently evaluating three new chemical entities for the treatment of type 2 diabetic nephropathy ("**T2DN**").

Principal Products and Patents

Products

The Company's most advanced development program, XRx-008 (XORLO[(1)]) is at a late clinical stage and is focused on demonstrating the potential of our first-in-class therapy for ADPKD. XRx-008 is the development name given to XORTX's proprietary oral formulation of Oxypurinol, and shows substantially increased bioavailability compared to Oxypurinol alone.

XORTX also has a second clinical stage program for T2DN. The Company has entered into a letter of intent to co-develop TMX-049, a "next generation" xanthine oxidoreductase drug with Teijin Pharma Limited ("Teijin"). This drug currently has an open Investigational New Drug status with the U.S. Food and Drug Administration ("FDA") and a phase 2 clinical trial that has completed enrollment in a US based trial. This clinical trial is anticipated to report in 2019 on the benefit of lowering uric acid in patients with T2DN and proteinuria.

Patents

XORTX has three U.S. granted patents with claims to the use of all uric acid lowering agents to treat high blood pressure, insulin resistance or diabetic nephropathy, and four U.S. patent applications with similar claims for the treatment of metabolic syndrome, diabetes, fatty liver disease as well as a composition of matter patent for formulations of xanthine oxidase inhibitors. Counterparts for some of these patent applications have also been submitted in Europe, Japan, and other jurisdictions. Additional patents to expand and extend coverage of uric acid lowering agents are currently under preparation.

Future Plans and Outlook

XORTX intends to grow its business by initiating a pivotal phase 3 clinical trial in ADPKD and a phase 2 clinical trial in T2DN patients, to demonstrate the benefit of lowering elevated uric acid as a therapy, and then commercialize by out-licensing these programs to specialty and larger pharmaceutical companies. In addition, XORTX plans to grow by expanding its knowledge and technical expertise into new therapeutic programs to treat a variety of other orphan diseases, fatty liver disease and health issues related to diabetes. The Company will be seeking additional capital to enable it to undertake these programs.

XORTX's overall strategic goal is to have two clinical trials underway by 2020. XORTX's ADPKD program is poised to advance to a pivotal phase 3 clinical trial in 10 months assuming sufficient funding is raised by the Company and the secondary program in T2DN is planned to enter phase 2b proof of concept testing in 14 months, also assuming sufficient funding is in place. Based upon recently published and successful phase 2 clinical pilot trials, progression of kidney disease in ADPKD and chronic kidney disease (~50% T2DN) can be slowed or perhaps stopped by decreasing uric acid levels into the mid-normal range of serum concentration (Goicoechea et al. (2015) Allopurinol and Progression of CKD and Cardiovascular Events: A long-term Follow-up, Am J Kid Dis; Kim et al. (2014) High-normal serum uric acid predicts the development of chronic kidney disease in patients with T2DN mellitus and preserved kidney function, J Diabetes Complications). Given the existing, successful clinical trials and associated data that shows the benefit of lowering uric acid levels in progressive kidney disease, XORTX anticipates that the probability of translating its clinical trial testing will be increased.

The three year business objectives of XORTX are as follows:

With respect to ADPKD and subject to sufficient funding being available:

1. Manufacture Oxypurinol and formulation in preparation for pivotal phase 3 clinical trials.
2. Complete the Investigational New Drug application ("IND") process to advance XRx-008 and characterize bioavailability of XRx-008 in man within 10 months.
3. Complete and receive 'orphan designation' for this program.
4. Submit the phase 3 pivotal trial protocol to demonstrate the effectiveness of uric acid lowering by XRx-008 in ADPKD patients and initiate the clinical trial under a special protocol assessment (SPA).
5. Complete licensing or co-development agreements for the ADPKD program within the next 24 months with global pharmaceutical company partners in Europe, Japan, Korean and/or North American partners resulting in upfront, milestone and royalty payments upon new drug application ("NDA") approval.

A number of specialty pharmaceutical companies have expressed an interest in the ADPKD program suggesting an increased probability of partnering of the ADPKD program once phase 3 clinical trial, under SPA, is finalized or in the early stages of recruiting the phase 3 trial.

With respect to T2DN and subject to sufficient funding being available:

1. Complete a definitive agreement for exclusive global rights to develop TMX-049 with Teijin Pharma for renal disease, including type 2 diabetic nephropathy.
2. Submit phase 2b clinical trial protocol to advance the TMX-049into a phase 2b clinical trial in patients with progressive T2DN within 14 months.
3. Initiate and complete that phase 2b proof of concept trial for T2DN within the next 36 months.
4. Complete a licensing or co-development agreement with a large market pharmaceutical partner for phase 3a and 3b co-development of T2DN followed by NDA submission to the FDA.

Tertiary programs of interest to XORTX include several orphan disease indications where aberrant purine and uric acid metabolism could be anticipated to accelerate kidney and liver disease progression. Those orphan diseases include "Follow-On Orphan Market Opportunities": IgA Nephropathy, and Nephropathy associated with Cystic Fibrosis as available funding, staff and time capacity permit. In addition, XORTX anticipates activities to advance a therapy for diabetes associated liver disease.

Recent Developments

On January 9, 2018, the Company completed the previously announced reverse take-over ("RTO") and acquisition by APAC Resources Inc. ("APAC") of all of the issued and outstanding shares of XORTX Pharma Inc. (the "Acquisition"). The resulting company was named XORTX Therapeutics Inc. and XORTX Pharma Inc. became a wholly owned subsidiary of XORTX.

Also, pursuant to the Acquisition, the Company raised gross proceeds of $1,957,370 by way of a private placement through the issuance of 3,914,740 units (the "Units"), completed concurrently with the completion of the Acquisition. Each Unit consisted of one common share and one common share purchase warrant ("Warrant"), each Warrant entitling the holder to purchase one additional common share at a price of $0.80 for a period of two years from the date of issuance of the Unit. Finders fees in the aggregate amount of $45,000 and 90,000 Warrants were paid to registered broker dealers.

On April 19, 2018, XORTX announced that the Polycystic Kidney Disease (PKD) Foundation of America (the "PKD Foundation") formally recognized XORTX as a leader advancing the development of treatments for progressive kidney disease and specifically rare diseases such as ADPKD.

On June 6, 2018, XORTX announced that the Company's shares were approved to trade on the OTCQB Venture Market under the symbol XRTXF.

On June 8, 2018, XORTX announced that the Company along with Cato Clinical Research ("Cato") filed its pre-IND meeting request letter with the FDA. The request for a pre-IND (Investigational New Drug) meeting was accompanied by pre-IND documents and initiated formal communications with the FDA regarding development of XRx-008 for the treatment of ADPKD.

On August 13, 2018, XORTX announced that the Company with its collaborative partner, Cato, filed its pre-IND meeting documents with the FDA which documents provided a comprehensive overview of the program and facilitated formal communications with the FDA regarding development of XRx-008 for the treatment of ADPKD in advance of the Company's meeting with the FDA that occurred September 20, 2018.

On September 10, 2018, XORTX announced that the Company with its collaborative partner, Cato, submitted documents to the FDA to receive Orphan Drug Designation (ODD) status for the development of XRx-008 for the treatment of ADPKD.

On October 23, 2018, XORTX announced that the Company's Polycystic Kidney Disease Clinical Development Plan had been reviewed and accelerated. This major revision to the Company's original clinical development plan was acceptable to the FDA.

On November 26, 2018, XORTX received a response from the FDA regarding the Company's ODD application that was submitted in September 2018 which clarified the additional information needed to obtain ODD for the use of XRx-008 as a treatment for ADPKD. Supplemental information will be filed with the FDA in 2019 to continue the process of obtaining ODD status for XRx-008.

On March 12, 2019, XORTX announced that it had signed a non-binding Letter of Intent (the "**LOI**") with Japan's Teijin Pharma Limited ("**Teijin**") for the exclusive global rights (excluding Japan) to develop TMX-049, a new generation of xanthine oxidoreductase inhibitor, for the treatment of progressive kidney disease. The overall goal of the LOI recognizes the mutual interest of Teijin and XORTX to advance together to a definitive license agreement which will grant XORTX the exclusive global rights to develop TMX-049 for progressive kidney disease and the option to use this molecule for other therapeutic programs (the "Definitive Agreement"). Teijin will retain the rights to the Japanese market and Teijin and XORTX will share future development costs. Teijin has already devoted considerable time, funding and resources to the development of TMX-049 that is currently under development in an ongoing Phase 2a study in T2DN patients in the US with reporting expected in Q3 2019. Teijin and XORTX are arm's length parties and no finder's fees are payable in respect to this transaction. The Definitive Agreement contemplated by the LOI will include several milestone payments to Teijin to be confirmed at the time of signing of the Definitive Agreement. These milestone payments will be based on key value creating clinical milestones and represent checkpoints where the TMX-049 program is further de-risked and advanced toward marketing approval. After signing the LOI and once the phase 2b clinical trial protocol in T2DN is finalized, XORTX will make an initial payment to Teijin to accelerate manufacturing of a clinical supply of drug for this study. This payment will underscore the commitment of both parties to prioritize the development of this phase 2b clinical program for the treatment of T2DN.

Management and Director Changes

On February 16, 2018, XORTX announced the appointment of Allan Williams and Paul Van Damme as directors of the Company and the resignation of Dr. Alan Moore as director.

On May 8, 2018, XORTX announced the appointment of Bruce Rowlands, a director of XORTX, as Chairman of the Board of Directors.

On June 27, 2018, XORTX announced that Bruce Cousins, an experienced biopharma industry executive, was elected to the Board of Directors.

On November 6, 2018, the Company announced the appointment of James Fairbairn as Chief Financial Officer.

For full biographies of these individuals please refer to the Company website: www.xortx.com.

Summary of Quarterly Results

The table below sets forth unaudited quarterly results prepared by management for the eight previous quarters to December 31, 2018:

(unaudited)	2018 Q4	2018 Q3	2018 Q2	2018 Q1
Accretion	401	397	462	661
Amortization of Intangible Assets	4,922	4,873	4,760	4,761
Foreign Exchange (gain) loss	(27,051)	9,192	(10,239)	(14,280)
Consulting	6,000	12,720	43,569	46,575
General and administrative	5,208	2,491	479	3,506
Interest	7,011	3,262	7,673	2,431
Investor Relations	8,836	10,807	1,139	5,780
Listing fees	9,010	8,372	15,052	9,561
Professional Fees	22,414	19,593	13,050	27,837
Research and Development	20,175	137,921	121,953	62,202
Share Based Payments	8,652	18,983	24,904	222,555
Travel	4,478	30,214	3,730	14,972
Wages and Benefits	46,904	48,000	48,347	51,914
Charge related to public company listing	30,503	-	-	2,608,281
Total Comprehensive Loss	147,463	306,825	274,879	3,046,756
Loss per Share	(0.00)	(0.00)	(0.00)	(0.05)
(unaudited)	**2017 Q4**	**2017 Q3**	**2017 Q2**	**2017 Q1**
Accretion	3,878	1,498	-	-
Amortization of Intangible Assets	4,309	4,198	4,126	4,144
Foreign Exchange (gain) loss	758	(6,537)	(1,357)	(3,568)
General and administrative	4,007	4,977	4,112	3,153
Interest	6,514	3,774	2,587	2,588
Investor Relations	7,800	10,882	-	1,500
Professional Fees	56,089	9,577	2,284	4,516
Research and development	66,367	-	-	-
Share Based Payments	23,169	23,168	23,168	23,167
Travel	8,397	5,324	3,150	673
Wages and Benefits	71,576	30,233	30,000	30,000
Total Comprehensive Loss	252,864	87,094	68,070	66,173
Loss per Share	(0.01)	(0.00)	(0.00)	(0.00)

Three months ended December 31, 2018

The Company incurred a comprehensive loss of $147,463 ($0.00 per share) for the three months ended December 31, 2018 compared to $252,864 ($0.01 per share) in the three months ended December 31, 2017. This decrease in net loss is primarily related to the following:

Professional fees - $22,414 (2017 - $56,089) – Professional fees decreased over the three months ended December 31, 2018 as the Company incurred increased accounting and legal fees in the prior year in preparation for becoming a public company.

Research and development - $20,175 (2017 - $66,367) – Research and development expenses were higher in the fourth quarter of 2017 as the Company entered into the contract with Cato during that period.

Share-based payments - $8,652 (2017 - $23,169) – Share-based payments decreased due to the forfeiture of 250,000 options during the period, and the related expense of the unvested options that was reversed.

Wages and benefits - $46,904 (2017 - $71,576) – Wages and benefits decreased as there were salaries accrued in the fourth quarter of 2017 for work that was completed during that year.

The decrease in net loss for the three months ended December 31, 2018 compared to the three months ended December 31, 2017 was offset with the addition of consulting ($6,000) and listing fees ($9,010) in the current year. Listing fees increased after the Company completed its RTO transaction to become public and listed the Company's shares on the CSE in Q1 2018 and the OTCQB Venture Market in Q2 2018, and consulting expenses increased at the same time as consultants were hired as the Company increased activity.

Selected Annual Financial Information

The financial information reported here in has been prepared in accordance with IFRS. The Company uses the Canadian dollar ("CDN") as its presentation currency. The following table represents selected financial information for the Company's fiscal years 2018, 2017 and 2016.

Selected Statement of Operations Data

	2018	2017	2016
Revenue	$Nil	$Nil	$Nil
Comprehensive loss for the year	$3,775,923	$474,201	$414,834
Weighted average shares	61,816,018	22,343,661	21,423,940
Loss per share, basic and diluted	$0.06	$0.02	$0.02

Selected Statement of Financial Position Data

	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016
Cash and cash equivalents	$260,019	$61,939	$16,769
Net working capital (deficiency)	$79,201	$(1,045,921)	$(581,190)
Total assets	$1,265,240	$490,602	$282,463
Long-term liabilities	$43,255	$35,768	-

Comparison of Operations for the 2018 and 2017 Financial Years

Results of Operations

	2018	2017	Change $	Change %
Amortization	19,316	16,777	2,539	15%
Consulting	108,864	-	108,864	100%
General and administrative	11,684	16,249	(4,565)	(28%)
Investor relations	26,562	20,182	6,380	32%
Listing fees	41,995	-	41,995	100%
Professional fees	82,894	72,466	10,428	14%
Research and development	342,251	66,367	275,884	416%
Share-based payments	275,094	92,672	182,422	197%
Travel	53,394	17,544	35,850	204%
Wages and benefits	195,165	161,809	33,356	21%
Accretion	1,921	5,376	(3,455)	(64%)
Listing expense	2,638,784	-	2,638,784	100%
Foreign exchange gain	(42,378)	(10,704)	(31,674)	296%
Interest and other expenses	20,377	15,463	4,914	32%
Comprehensive Loss for the Year	3,775,923	474,201	3,301,722	696%
Loss per Share	0.06	0.02	0.04	200%

Year ended December 31, 2018

The Company incurred a comprehensive loss of $3,775,923 ($0.06 per share) for the year ended December 31, 2018 compared to $474,201 ($0.02 per share) in the year ended December 31, 2017. This increase in net loss is primarily related to the listing expense from the RTO transaction of $2,638,784, as well as the following:

Consulting - $108,864 (2017 - $nil) – Consulting fees increased as the Company hired consultants during the 2018 year.

Listing fees - $41,995 (2017 - $nil) – Listing fees increased after the Company completed its RTO transaction to become public and listed the Company's shares on the CSE in Q1 2018 and the OTCQB Venture Market in Q2 2018.

Research and development - $342,251 (2017 - $66,367) – Research and development activity has increased in relation to the business objectives outlined above.

Share-based payments $275,094 (2017 - $92,672) **–** The share-based payments increased during the year ended December 31, 2018 as there were 2,924,000 options granted during the period to directors, officers, and consultants. Of the 2,924,000 options granted, 500,000 have been cancelled, 800,000 options vested immediately, 1,350,000 options vested 25% on grant with the remaining options vesting in equal monthly installments over 36 months, 250,000 options vested equally over 36 months and 24,000 options vested 25% immediately with the remaining options vesting 25% each quarter. No options were granted in the prior year period.

Travel - $53,394 (2017 - $17,544) – Travel increased as the Company increased corporate activity after completing the RTO.

Wages and benefits - $195,165 (2017 - $161,809) – The wages and benefits have increased as salaries increased due to the increase in activity of the Company.

Comparison of cash flows for the years ended December 31, 2018 and 2017

The Company realized a net cash inflow of $198,080 for the year ended December 31, 2018 compared to a net cash inflow of $45,170 for the year ended December 31, 2017. The increase in cash and cash equivalents for the year ended December 31, 2018 compared to December 31, 2017 was primarily due to the following:

Operating activities – Cash used in operating activities for the year ended December 31, 2018 was $1,555,357 (2017 – cash provided of $91,174). The increase of cash used of $1,646,531 was primarily due to the deposit paid to Cato of $631,866, as well as the increase in net loss of the Company of $3,301,722, offset by the non-cash items such as the charge related to public company listing of $2,638,784 and the share-based payments of $275,094.

Investing activities – Cash used in investing activities for the year ended December 31, 2018 was $154,808 (2017 - $179,704). This was primarily due to the transaction costs of the reverse takeover transaction with APAC net of cash acquired of $280,955, offset by the deferred transaction costs of $167,220 recorded as at December 31, 2017 related to the transaction.

Financing activities – Cash provided by financing activities in the year ended December 31, 2018 was $1,908,245 (2017 - $133,720). This increase in cash provided is due primarily to the private placement that took place during the period raising gross proceeds of $1,957,370 through the issuance of 3,914,740 units (the “Units”), at a price of $0.50 per Unit.

Liquidity and Capital Resources

As at December 31, 2018, the Company had a cash balance of $260,019 and a working capital position of $79,201 as compared to a cash balance of $61,939 and a working capital position of $(1,045,921) as at December 31, 2017. The Company’s primary source of funding is by way of raising capital through the issuance of equity to third party investors. As part of the reverse-takeover transaction between the Company and APAC, the Company raised gross proceeds of $1,957,370 through the issuance of units. Given the nature of the Company’s low monthly expenses and that favorable repayment agreements relating to existing outstanding accounts payable, including that $317,000 of the existing accounts payable are due to a related party, the Company believes that its current cash resources are sufficient for it to meet its existing monthly expenses however additional funding to meet its obligations with regard to current outstanding accounts payable and for the Company to undertake its business plan will be required.

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

Commitments

The Company has long-term arrangements with commitments as at December 31, 2018 and 2017 as follows:

	2018	2017
	$	$
Management services – officers	192,000	120,000

Dr. Allen Davidoff, President, CEO and a director of the Company has a long-term employment agreement with the Company. The agreement has a termination clause whereby Dr. Davidoff is entitled to the equivalent of 12 times his then current monthly salary which, as of December 31, 2018 equated to $192,000.

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.

Related parties include officers and directors of the Company and by companies controlled by officers and directors of the Company.

During the years ended December 31, 2018 and 2017, the Company incurred the following transactions with related parties:

a) Wages and benefits were paid or accrued to an officer of the Company in the amount of $195,165 (2017 - $161,809).

b) Consulting fees were paid or accrued to an officer of the Company in the amount of $6,000 (2017 - $nil).

c) Professional fees were paid or accrued to an officer of the Company in the amount of $18,750 (2017 - $nil).

d) Interest of $nil (2017 - $2,593) was accrued to a director of the Company during the year.

e) As at December 31, 2018, $6,881 (2017 - $3,755) was payable to directors and officers of the Company. The balance is unsecured, non-interest bearing, and has no fixed terms of repayment.

f) As at December 31, 2018, $340,110 was accrued to directors, former directors, and officers of the Company (December 31, 2017 - $333,110). The balance is unsecured, non-interest bearing and has no fixed terms of repayments.

g) Management compensation transactions for the years ended December 31, 2018 and 2017 are summarized as follows:

	Short-term employee benefits	Share-based payments	Total
	$	$	$
Year ended December 31, 2017			
Directors and officers	161,809	69,503	231,312
Year ended December 31, 2018			
Directors and officers	**219,915**	**160,809**	**380,724**

Changes in accounting policies – IFRS 9

The Company adopted all of the requirements of IFRS 9 Financial Instruments ("IFRS 9") as of January 1, 2018. IFRS 9 replaces IAS 39 Financial Instruments: Recognition and Measurement ("IAS 39"). IFRS 9 utilizes a revised model for recognition and measurement of financial instruments and a single, forward-looking "expected loss" impairment model. Most of the requirements in IAS 39 for classification and measurement of financial liabilities were carried forward in IFRS 9, so the Company's accounting policy with respect to financial liabilities is unchanged. As a result of the adoption of IFRS 9, management has changed its accounting policy for financial assets retrospectively, for assets that continued to be recognized at the date of initial application. The change did not impact the carrying value of any financial assets or financial liabilities on the transition date.

The following is the Company's new accounting policy for financial instruments under IFRS 9:

a) Classification

The Company classifies its financial instruments in the following categories: at fair value through profit and 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 Company completed a detailed assessment of its financial assets and liabilities as at January 1, 2018. The following table shows the original classification under IAS 39 and the new classification under IFRS 9:

	Original classification	New classification
Cash	FVTPL	FVTPL
Accounts payable and accrued liabilities	amortized cost	amortized cost
Liability component on convertible loans	amortized cost	amortized cost

The Company did not restate prior periods as there was no impact at the date of initial application. The adoption of IFRS 9 resulted in no impact to the opening accumulated deficit nor to the opening balance of accumulated comprehensive income on January 1, 2018.

b) Measurement

Financial assets at FVTOCI

Elected investments in equity instruments at FVTOCI are initially recognized at fair value plus transaction costs. Subsequently they are measured at fair value, with gains and losses recognized in other comprehensive income (loss).

Financial assets and liabilities at amortized cost

Financial assets and liabilities at amortized cost are initially recognized at fair value plus or minus transaction costs, respectively, and subsequently carried at amortized cost less any impairment.

Financial assets and liabilities at FVTPL

Financial assets and liabilities carried at FVTPL are initially recorded at fair value and transaction costs are expensed in the consolidated statements of net (loss) income. Realized and unrealized gains and losses arising from changes in the fair value of the financial assets and liabilities held at FVTPL are included in the consolidated statements of net (loss) income in the period in which they arise. Where management has opted to recognize a financial liability at FVTPL, any changes associated with the Company's own credit risk will be recognized in other comprehensive income (loss).

c) Impairment of financial assets at amortized cost

The Company recognizes a loss allowance for expected credit losses on financial assets that are measured at amortized cost.

At each reporting date, the Company measures the loss allowance for the financial asset at an amount equal to the lifetime expected credit losses if the credit risk on the financial asset has increased significantly since initial recognition. If at the reporting date, the financial asset has not increased significantly since initial recognition, the Company measures the loss allowance for the financial asset at an amount equal to the 12 month expected credit losses. The Company shall recognize in the consolidated statements of net (loss) income, as an impairment gain or loss, the amount of expected credit losses (or reversal) that is required to adjust the loss allowance at the reporting date to the amount that is required to be recognized.

d) Derecognition

Financial assets

The Company derecognizes financial assets only when the contractual rights to cash flows from the financial assets expire, or when it transfers the financial assets and substantially all of the associated risks and rewards of ownership to another entity. Gains and losses on derecognition are generally recognized in the consolidated statements of net (loss) income. However, gains and losses on derecognition of financial assets classified as FVTOCI remain within accumulated other comprehensive income (loss).

Financial liabilities

The Company derecognizes financial liabilities only when its obligations under the financial liabilities are discharged, cancelled or expired. Generally, the difference between the carrying amount of the financial liability derecognized and the consideration paid and payable, including any non-cash assets, is recognized in the consolidated statement of net income (loss).

Changes in accounting policies – IFRS 15

The adoption of IFRS 15 Revenue from contracts with customers did not have an impact on the Company's consolidated financial statements.

Accounting standards issued but not yet effective

The following new standard has been issued but not yet applied:

a) IFRS 16 – Leases. IFRS 16 Leases will replace IAS 17 Leases

This standard introduces a single lessee accounting model and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months. A lessee is required to recognize a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. The standard will be effective for annual periods beginning on or after January 1, 2019. This standard will affect the way in which the Company accounts for its operating leases and will increase the related disclosures.

Other accounting pronouncements with future effective dates are either not applicable or are not expected to have a material impact on the Company's consolidated financial statements.

Financial and Capital Risk Management

The Company's financial instruments consist of cash, accounts payable and accrued liabilities, and the liability component on convertible loans. These financial instruments are classified as financial assets at FVTPL and financial liabilities at amortized cost. The fair values of these financial instruments approximate their carrying values at December 31, 2018, 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, 2018 and 2017 and categorized into levels of the fair value hierarchy:

		December 31, 2018		December 31, 2017	
	Level	Carrying Value	Estimated Fair Value *	Carrying Value	Estimated Fair Value *
		$	$	$	$
FVTPL					
Cash	1	260,019	260,019	61,939	61,939
Other financial liabilities					
Accounts payable and accrued liabilities	2	798,132	798,132	778,683	778,683
Liability component on convertible loans	2	43,255	43,255	272,464	272,464

* Fair value approximates the carrying amounts due to the short-term nature.

There were no transfers for levels of change in the fair value measurements of financial instruments for the years ended December 31, 2018 and 2017.

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, 2018	December 31, 2017
	$	$
Cash	260,019	61,939

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, 2018 and 2017 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.

The contractual maturities of these financial liabilities as at December 31, 2018 and 2017 are summarized below:

	Payments due by period as of December 31, 2018			
	Total	Less than 3 months	Between 3 months and 1 year	1-3 years
	$	$	$	$
Accounts payable and accrued liabilities	798,132	798,132	-	-
Liability component on convertible loans	43,255	43,255	-	-
	841,387	841,387	-	-

	Payments due by period as of December 31, 2017			
	Total	Less than 3 months	Between 3 months and 1 year	1-3 years
	$	$	$	$
Accounts payable and accrued liabilities	778,683	778,683	-	-
Liability component on convertible loans	272,464	236,696	-	35,768
	1,051,147	1,015,379	-	35,768

c) Market risk

i) Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate due to changes in market interest rates. The Company's bank accounts bear interest. Management believes that the credit risk concentration with respect to financial instruments included in cash is minimal.

ii) Foreign Currency Risk

The Company is exposed to foreign exchange risk on its US$75,000 provision for patent acquisition, US$ 505,331 deposit, US$28,855 accounts payable balances, and US$2,644 cash account. Based on the foreign exchange exposure arising from the above, varying the foreign exchange rate to reflect a 10% appreciation or depreciation of the Canadian dollar against the U.S. dollar would result in an increase/decrease of approximately $40,000 (2017 - $15,000) in the Company's loss from operations.

Capital Management

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:

Equity is comprised of:	December 31 2018	December 31 2017
	$	$
Share capital	5,863,872	1,391,673
Share-based payments and warrants reserve	581,486	296,535
Equity component on convertible loans	5,202	10,257
Deficit	(6,129,022)	(2,353,099)

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.

Outstanding Share Data

As at April 29, 2019, the Company had the following shares outstanding:

- Class	Class A Common Shares
- Authorized	Unlimited, without par value
- Issued and outstanding	62,919,691

Options Outstanding:

The following table summarizes information on stock options outstanding at April 29, 2019:

Exercise Price	Number Outstanding	Expiry Date
$0.50	2,000,000	March 19, 2023
$0.50	174,000	October 9, 2023
$0.50	250,000	November 5, 2023

Warrants Outstanding:

The following table summarizes information on outstanding warrants as at April 29, 2019:

Exercise Price	Number Outstanding	Expiry date
$0.80	4,004,740	January 9, 2020

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.