



**CARDIOL THERAPEUTICS INC.  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
THREE AND NINE MONTHS ENDED  
SEPTEMBER 30, 2019**

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## MANAGEMENT'S DISCUSSION AND ANALYSIS

### Introduction

The following management's discussion and analysis ("MD&A") of the financial condition and results of the operations of Cardiol Therapeutics Inc. (the "Corporation" or "Cardiol") constitutes Management's review of the factors that affected the Corporation's financial and operating performance for the three and nine months ended September 30, 2019 (the "2019 Fiscal Period"). This MD&A was written to comply with the requirements of National Instrument 51-102 – Continuous Disclosure Obligations. This discussion should be read in conjunction with the financial statements for the year ended December 31, 2018 and the period from January 19, 2017 (incorporation) to December 31, 2017, and the unaudited condensed interim financial statements for the three and nine months ended September 30, 2019 ("Financial Statements"), together with the respective notes thereto. Results are reported in Canadian dollars, unless otherwise noted. The Financial Statements and the financial information contained in this MD&A are prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board and interpretations of the IFRS Interpretations Committee. In the opinion of Management, all adjustments (which consist only of normal recurring adjustments) considered necessary for a fair presentation have been included.

This MD&A is dated November 7, 2019. All dollar amounts in this MD&A are reported in Canadian dollars, unless otherwise stated. Unless otherwise noted or the context indicates otherwise the terms "we", "us", "our", "Cardiol" or the "Corporation" refer to Cardiol Therapeutics Inc.

This MD&A is presented current to the date above unless otherwise stated. The financial information presented in this MD&A is derived from the Financial Statements. This MD&A contains forward-looking statements that involve risks, uncertainties, and assumptions, including statements regarding anticipated developments in future financial periods and our plans and objectives. There can be no assurance that such information will prove to be accurate, and readers are cautioned not to place undue reliance on such forward-looking statements. See "Forward-Looking Statements" and "Risk Factors".

### Forward-Looking Information

This MD&A contains forward-looking information that relate to the Corporation's current expectations and views of future events. In some cases, this forward-looking information can be identified by words or phrases such as "may", "might", "will", "expect", "anticipate", "estimate", "intend", "plan", "indicate", "seek", "believe", "predict", or "likely", or the negative of these terms, or other similar expressions intended to identify forward-looking information. Statements containing forward-looking information are not historical facts. The Corporation has based this forward-looking information on its current expectations and projections about future events and financial trends that it believes might affect its financial condition, results of operations, business strategy, and financial needs. The forward-looking information includes, among other things, statements relating to:

- our launch, marketing, and sale of a pharmaceutically-manufactured pure cannabidiol oil as a Cannabis Act product line in Q4 2019;
- the ability of our nanotherapeutics to deliver cannabinoids and other anti-inflammatory drugs to inflamed tissue in the heart;
- our intention to initiate clinical development during the first quarter of 2020
- our development of proprietary cannabidiol formulations for near-term commercialization;
- our ability to develop new formulations;
- the successful development and commercialization of our current product candidates and the addition of future products;
- our expectation of a significant increase in the market and interest for pure pharmaceutical cannabinoid products following de-scheduling of cannabinoids from the Canada's Controlled Drugs and Substances Act (the "CDSA");
- the expected growth in the size of the market for cannabidiol in Canada, the United States, and internationally;

- our intention to build a pharmaceutical brand and cannabidiol products focused on addressing heart disease with a particular focus on heart failure;
- the expected medical benefits, viability, safety, efficacy, and dosing of cannabidiol;
- patents, including, but not limited to, our ability to have patents issued covering our drugs, drug candidates and processes, as well as successfully defending oppositions and legal challenges;
- our expectation of a near-term revenue opportunity from the sale of pure cannabidiol products;
- our competitive position and the regulatory environment in which we operate;
- our financial position; our business strategy; our growth strategies; our operations; our financial results; our dividends policy; our plans and objectives; and
- expectations of future results, performance, achievements, prospects, opportunities, or the market in which we operate.

In addition, any statements that refer to expectations, intentions, projections, or other characterizations of future events or circumstances contain forward-looking information. Forward-looking information is based on certain assumptions and analyses made by the Corporation in light of the experience and perception of historical trends, current conditions, and expected future developments and other factors it believes are appropriate, and are subject to risks and uncertainties. Although we believe that the assumptions underlying these statements are reasonable, they may prove to be incorrect, and we cannot assure that actual results will be consistent with this forward-looking information. Given these risks, uncertainties, and assumptions, prospective investors should not place undue reliance on this forward-looking information. Whether actual results, performance, or achievements will conform to the Corporation's expectations and predictions is subject to a number of known and unknown risks, uncertainties, assumptions, and other factors, including those listed under "Risk Factors", which include:

- the inherent uncertainty of product development;
- our requirement for additional financing;
- our negative cash flow from operations;
- our history of losses;
- dependence on success of the sale of our pharmaceutically-manufactured pure cannabidiol oil as a Cannabis Act product line and our early-stage product candidates which may not generate revenue;
- reliance on Management, loss of members of Management or other key personnel, or an inability to attract new Management team members;
- our ability to successfully design, commence, and complete clinical trials, including the high cost, uncertainty, and delay of clinical trials and additional costs associated with any failed clinical trials;
- potential negative results from clinical trials and their adverse impacts on our future commercialization efforts;
- our ability to establish and maintain commercialization organizations in the United States ("U.S."), Mexico, and elsewhere;
- our ability to receive and maintain regulatory exclusivities, including Orphan Drug Designations, for our drugs and drug candidates;
- delays in achievement of projected development goals;
- unpredictable and volatile market price for our Class A common shares and the common share purchase warrants of the Corporation (the "Warrants");
- failure to protect and maintain and the consequential loss of intellectual property rights;
- third-party claims relating to misappropriation by our employees of their intellectual property;
- reliance on third parties to conduct and monitor our pre-clinical studies and clinical trials;
- our product candidates being subject to controlled substance laws which may vary from jurisdiction to jurisdiction;
- changes in laws, regulations, and guidelines relating to our business, including tax and accounting requirements;
- our reliance on current early-stage research regarding the medical benefits, viability, safety, efficacy, and dosing of cannabinoids;
- claims for personal injury or death arising from the use of products and product candidates

- produced by us;
- uncertainty relating to market acceptance of our product candidates;
  - our lack of experience in commercializing any products;
  - the level of pricing and reimbursement for our products and product candidates, if approved;
  - our dependence on Dalton Chemical Laboratories, Inc. operating as Dalton Pharma Services (“Dalton”) and other contract manufacturers;
  - unsuccessful collaborations with third parties;
  - business disruptions affecting third-party suppliers and manufacturers;
  - lack of control in future prices of our product candidates;
  - our lack of experience in selling, marketing, or distributing our products;
  - competition in our industry;
  - our inability to develop new technologies and products and the obsolescence of existing technologies and products;
  - unfavorable publicity or consumer perception towards cannabidiol;
  - product liability claims and product recalls;
  - expansion of our business to other jurisdictions;
  - fraudulent activities of employees, contractors, and consultants;
  - our reliance on key inputs and their related costs;
  - difficulty associated with forecasting demand for products;
  - operating risk and insurance coverage;
  - our inability to manage growth;
  - conflicts of interest among our officers and Directors;
  - managing damage to our reputation and third-party reputational risks;
  - relationships with customers and third-party payors and consequential exposure to applicable anti-kickback, fraud, and abuse and other healthcare laws;
  - exposure to information systems security threats;
  - no dividends for the foreseeable future;
  - future sales of common shares by existing shareholders causing the market price for the common shares to fall; and
  - the issuance of common shares in the future causing dilution.

If any of these risks or uncertainties materialize, or if assumptions underlying the forward-looking information prove incorrect, actual results might vary materially from those anticipated in the forward-looking information.

Information contained in forward-looking information in this MD&A is provided as of the date of this MD&A, and we disclaim any obligation to update any forward-looking information, whether as a result of new information or future events or results, except to the extent required by applicable securities laws. Accordingly, potential investors should not place undue reliance on forward-looking information.

## **Overview**

On December 20, 2018, the Corporation completed its initial public offering (the “IPO”) on the Toronto Stock Exchange (the “TSX”). As a result, the common shares commenced trading on the TSX under the symbol “CRDL” and the Warrants commenced trading under the symbol “CRDL.WT”. On May 30, 2019, the Corporation also began trading on the OTCQX Best Market under the symbol “CRTPF”.

The Corporation is focused on producing pharmaceutical cannabidiol (“CBD”) products and developing innovative therapies for heart disease, including acute myocarditis and other causes of heart failure. The Corporation’s lead product, CardiolRx™, is designed to be the safest and most consistent CBD formulation on the market. CardiolRx is pharmaceutically produced, cGMP certified, and does not contain any THC. The Corporation plans to commercialize CardiolRx during 2019 in the billion-dollar market for medicinal cannabinoids in Canada and is pursuing market introduction opportunities in Europe and Latin America. Cardiol is planning an international clinical study of CardiolRx in acute myocarditis, a condition caused by inflammation in heart tissue, which remains the most common cause of sudden cardiac death in people

less than 35 years of age and is a common cause of acute heart failure. The Corporation is also developing proprietary nanotechnology to deliver pharmaceutical CBD and other anti-inflammatory drugs directly to sites of inflammation in the heart that are associated with the development and progression of heart failure. Heart failure is the leading cause of death and hospitalization in North America with associated healthcare costs in the U.S. alone exceeding \$30 billion.

The Corporation has research programs focused on developing nanotherapeutics to treat heart failure underway at international centers of excellence, including the University of Alberta, the Houston Methodist DeBakey Heart & Vascular Center, and TecSalud del Tecnológico de Monterrey (“TecSalud”). Cardiol has also established an exclusive manufacturing arrangement with Dalton Pharma Services, a Health Canada-approved, U.S. Food and Drug Administration (“FDA”) registered, Current Good Manufacturing Practice (“cGMP”) manufacturer of pharmaceuticals, including cannabinoids, for supplying finished pharmaceutically-manufactured cannabidiol products to support the Corporation’s research and commercial development programs. Cardiol has an exclusive supply agreement with Noramco, Inc. (“Noramco”) to support Dalton’s manufacturing program with large scale supply of pure pharmaceutical cannabidiol.

Cardiol brings together a wealth of research and development experience, advanced manufacturing capabilities, and a Management team, Board of Directors, and Scientific Advisory Board comprising business and thought leaders with extensive industry experience and expertise in commercializing proprietary drugs.

## **Operations Highlights**

### **During the 2019 Fiscal Period**

(i) In January 2019, the remaining outstanding convertible debenture, with a face value of \$400,000, was converted into 2,700,000 common shares.

(ii) In January 2019, the Corporation granted 150,000 stock options to a certain officer of the Corporation. Each stock option allows the holder to acquire one common share of the Corporation at an exercise price of \$4.30 and expires on January 2, 2026. The options vested on grant.

(iii) In January 2019, the Corporation granted 285,000 stock options to certain employees and consultants of the Corporation. Each stock option allows the holder to acquire one common share of the Corporation at an exercise price of \$5.34. 125,000 stock options expire July 24, 2020 and vest 25% every three months from the grant date. 100,000 stock options expire January 24, 2024 and vest 25% every three months from the grant date. 60,000 stock options expire January 24, 2026 and vest 1/3 each on the first, second and third anniversaries of the grant date.

(iv) In January 2019, an additional 374,544 common shares at \$4.62 per share for gross proceeds of \$1,730,393 were granted under the Over-Allotment Option. As a result, an additional 22,472 compensation warrants were issued.

(v) In March 2019, the Corporation announced the appointment of Thomas (Tom) Moffatt, BBA, as Chief Commercial Officer.

Mr. Moffatt was most recently the Chief Operating Officer and Vice-President, Operations at Rx Drug Mart Inc., where he was responsible for the growth, marketing, and development of all operations for more than 45 stores, including marketing, personnel, and strategic activities. Established in 2015, Rx Drug Mart is a pharmacy retail organization that brings the priority back to the pharmacy, the patient, and the community.

Mr. Moffatt gained extensive experience during a tenure of more than 20 years at Shoppers Drug Mart, where he honed his analytical skills, specifically in the areas of finance, marketing, communications and development, P&L, merchandising, and corporate strategy. He rose through the ranks from Director

Operations Ontario West, to National Vice-President Operations and Strategy. Shoppers Drug Mart is Canada's leading drug store retailer, with more than 1,300 locations across Canada.

Following his wide-ranging career at Shoppers Drug Mart, Mr. Moffatt joined World Vintners Inc. where he was Senior Vice-President Retail and Corporate Development, Corporate Secretary, and President Retail. Mr. Moffatt oversaw the company's purchase and merger of two wine-producing and retail entities prior to their sale in 2008. He also developed and launched new wine brands specifically for big-box retailers and Independent Wine Dealers.

From 2010 to 2015, Mr. Moffatt was Senior Director of Mergers and Acquisitions/Pharmacy Operations at Loblaw Companies Ltd. and participated in the successful acquisition of Shoppers Drug Mart. Mr. Moffatt also established the current set of operational standards for the 503-store pharmacy group.

(vi) In March 2019, the Corporation cancelled 40,000 stock options exercisable at \$5.00 and originally to expire August 30, 2025.

(vi) In April 2019, the Corporation granted 140,000 stock options to certain officers and consultants of the Corporation. Each stock option allows the holder to acquire one common share of the Corporation at an exercise price of \$5.77 and expires on April 1, 2026. The options vest 1/3 each on the first, second and third anniversaries of the grant date.

(vi) In April 2019, the Corporation granted 60,000 stock options to a certain officer of the Corporation. Each stock option allows the holder to acquire one common share of the Corporation at an exercise price of \$5.42 and expires on April 4, 2026. The options vest 1/3 each on the first, second and third anniversaries of the grant date.

(vii) In June 2019, the Corporation announced it is planning a clinical trial in acute myocarditis utilizing its CardiolRx CBD formulation. See "Clinical Highlights" below.

### **Subsequent to September 30, 2019**

(i) Subsequent to September 30, 2019, the Corporation completed the manufacturing scale-up for commercialization of its CardiolRx 100 CBD formulation. CardiolRx 100 (100 mg/mL CBD with 3,000 mg of CBD per bottle) is designed to be the safest and most consistent high concentration CBD formulation available to Canadians that is THC-free (<10ppm). It is pharmaceutically produced in a Health Canada approved, FDA registered, and cGMP facility. The Corporation is also developing additional CBD products for medical use that may be suitable options when a lesser strength CBD is necessary, including formulations that contain 50 mg/mL and 25 mg/mL CBD.

(ii) Subsequent to September 30, 2019, the Corporation granted 160,000 stock options to certain employees of the Corporation. Each stock option allows the holder to acquire one common share of the Corporation at an exercise price of \$3.23 and expires on October 15, 2024. The options vest 1/3 each on the first, second and third anniversaries of the grant date.

(iii) Subsequent to September 30, 2019, the Corporation granted 90,000 stock options to certain consultants of the Corporation. Each stock option allows the holder to acquire one common share of the Corporation at an exercise price of \$3.28 and expires on October 29, 2021. The options vest 25% every three months from the grant date.

### **Clinical Highlights**

#### ***CardiolRx for the treatment of acute myocarditis***

Cardiol is planning a clinical program in acute myocarditis utilizing its CardiolRx CBD formulation. Cardiol's acute myocarditis program is being designed by an independent Steering Committee comprising thought leaders in cardiology from North America and Europe.

Acute myocarditis is characterized by inflammation in the heart muscle (myocardium). It has many causes but the most common is a viral infection. In a proportion of patients, the inflammation in the heart persists and causes decreased heart function with symptoms and signs of heart failure. In some cases, this becomes progressive and leads to a chronic dilated cardiomyopathy, which is the most common reason for heart transplantation.

Since people with acute myocarditis have heart failure, its treatment is based on standard-of-care recommendations for heart failure. This includes diuretics, ACE inhibitors, angiotensin receptors blockers, beta blockers, and aldosterone inhibitors. For those with a fulminant presentation, intensive care is often required, with the use of inotropic medications (to increase the force of the heart muscle contraction) and, occasionally, heart-lung bypass or ventricular assist devices. There is otherwise no specific treatment for acute myocarditis. Although some patients have responded to therapy with immuno-suppressive therapy (azathioprine) added to steroids, the data are not conclusive enough to be the recommended therapy. Immune-modulation therapy with immune globulin has been trialed but without clear success.

A number of published studies have shown that CBD has anti-inflammatory activities in a range of experimental inflammatory pathologies. In particular, CBD has been shown to reduce vascular inflammation and inflammation in the heart in a model of myocarditis. Our studies in an experimental model of heart failure has confirmed the anti-inflammatory activity as well as a prominent anti-fibrotic action which leads to progression of the heart dysfunction. Based upon this evidence, CBD has the potential to offer therapeutic benefits in the treatment for myocarditis.

Acute myocarditis is a rare disease but is still a significant cause of acute heart failure and death in younger individuals and remains the most common cause of sudden cardiac death in people under 35 years of age. The average age of patients with acute myocarditis is less than 45. The most recent data from the 'Global Burden of Disease Study' suggests that the prevalence of myocarditis is approximately 22/100,000 persons (estimated US patient population of 73,000), qualifying the condition as an orphan disease in the USA and in Europe.

Based on the large body of experimental evidence of the impressive anti-inflammatory activity of CBD in models of cardiovascular disease, Cardiol believes that there is a significant opportunity to develop a therapy for acute myocarditis that would be eligible for designation as an Orphan Drug. As a comparison, the U.S. orphan drug program was successfully utilized to accelerate the first FDA approval of CBD for the treatment of seizures associated with two rare and severe forms of epilepsy, Dravet syndrome and Lennox-Gastaut syndrome.

## **Outlook**

The Corporation expects that the current working capital of \$15,689,802 will be sufficient to fund operations and capital requirements through December 31, 2020.

During the remainder of 2019, the Corporation expects the following catalysts for growth:

1. The announcement of distribution agreements for the sale of the Corporation's CardiolRx pharmaceutical CBD formulation in Canada;
2. The commercial launch of CardiolRx pharmaceutical CBD in Q4 2019, which is expected to set a new industry standard for product purity and consistency;
3. The initiation of a clinical trial program to begin in Q1 2020, designed to demonstrate impact of the Corporation's proprietary pharmaceutical CBD formulation on inflammatory heart disease;
4. The development of global expansion plans to support the commercialization of CardiolRx pharmaceutical CBD in Europe and Latin America.

## Use of IPO Proceeds

The Corporation may reallocate the net IPO proceeds from time to time depending upon our growth strategy relative to market and other conditions in effect at the time. Until we expend the net IPO proceeds, we will hold them in cash and/or invest them in short-term, interest-bearing, investment-grade securities.

A comparison between the projected use of proceeds for the two-year period subsequent to closing the IPO, as disclosed in the Corporation's prospectus dated December 14, 2018 and spending from January 1, 2019 to September 30, 2019 is as follows:

<b>Use of Proceeds</b>	<b>Amount</b>	<b>Spent</b>	<b>Remaining</b>
<b>Cardiol CTX product series and acute myocarditis:</b>			
Basic science, preclinical studies, and a Phase 1 clinical program <sup>(1)</sup>	1,700,000	526,758	1,173,242
Phase 2 clinical trial program <sup>(1)</sup>	2,500,000	93,889	2,406,111
<b>Glioblastoma Multiforme:</b>			
Fund the development of immunotherapy in combination with cannabinoids for its target indication of Glioblastoma Multiforme	1,100,000	-	1,100,000
<b>Market introduction, distribution, and marketing of a pharmaceutically manufactured commercial cannabidiol oil product:</b>			
Direct-to-consumer sales expenditure, including website development and marketing to third-party partners and logistics <sup>(2)</sup>	1,500,000	154,920	1,282,492
Prescription sales expenditure, including physician advocacy, creative developments and producing material samples <sup>(2)</sup>	2,000,000	35,158	1,964,842
<b>Other:</b>			
Exclusivity payment to Noramco (USD \$3.0 million) <sup>(3)</sup>	3,900,000	3,900,000	-
100,000, expected to be made on the initiation of a Phase 2 program, to Meros <sup>(1)</sup>	100,000	-	100,000

1. Spending includes basic science, pre-clinical studies, and preparations for the initiation of a clinical trial program in inflammatory heart disease to begin in 2020.
2. Expenses are expected to increase in the remainder of 2019 as the Corporation prepares to commercialize its first pharmaceutical CBD product, CardiolRx, during Q4 2019.
3. Exclusivity payment, made in December 2018, is included in working capital (in prepaid inventory) less approximately \$200,000 included in research and development expenses at September 30, 2019.



## Summary of Quarterly Results

The Corporation's quarterly information in the table below is prepared in accordance with IFRS.

Three Months Ended	Total	Profit or (Loss)		Total
	Revenue	Total (\$)	Per Share <sup>(9)</sup>	Assets
	(\$)		(\$)	(\$)
September 30, 2019 <sup>(1)</sup>	nil	(3,491,816)	(0.13)	18,303,737
June 30, 2019 <sup>(2)</sup>	nil	(3,642,636)	(0.14)	20,535,419
March 31, 2019 <sup>(3)</sup>	nil	(3,490,862)	(0.14)	22,914,147
December 31, 2018 <sup>(4)</sup>	nil	(9,073,590)	(0.58)	24,684,773
September 30, 2018 <sup>(5)</sup>	nil	(4,910,232)	(0.32)	13,094,086
June 30, 2018 <sup>(6)</sup>	nil	(1,358,280)	(0.09)	12,143,959
March 31, 2018 <sup>(7)</sup>	nil	(551,633)	(0.04)	2,854,705
December 31, 2017 <sup>(8)</sup>	nil	(588,260)	(0.04)	3,220,683

### Note:

- (1) Net loss of \$3,491,816 included research and development of \$1,237,727, administration of \$815,102, share-based compensation of \$551,977, investor relations and promotions of \$459,473, and salaries and benefits of \$459,037.
- (2) Net loss of \$3,642,636 included share-based compensation of \$867,906, administration of \$813,674, research and development of \$748,481, investor relations and promotions of \$688,290, and salaries and benefits of \$541,488.
- (3) Net loss of \$3,490,862 included share-based compensation of \$1,257,658, investor relations and promotions of \$665,738, administration of \$598,856, research and development of \$512,745 and salaries and benefits of \$385,434.
- (4) Net loss of \$9,073,590 included change in derivative liability of \$5,635,573, share-based compensation of \$895,960, administration of \$731,852, salaries and benefits of \$577,675, listing expense of \$397,528, investor relations and promotions of \$355,291, research and development of \$281,098 and accretion and interest on convertible debentures of \$268,900.
- (5) Net loss of \$4,910,232 included change in derivative liability of \$2,246,688, share-based compensation of \$757,285, administration of \$716,192, research and development of \$447,023, salaries and benefits of \$410,912, accretion and interest on convertible debentures of \$267,727, and investor relations and promotions of \$81,187.
- (6) Net loss of \$1,358,280 included research and development of \$548,262, administration of \$322,502, salaries and benefits of \$315,342, accretion and interest on convertible debentures of \$108,041 and investor relations and promotions of \$41,038.
- (7) Net loss of \$551,633 included research and development of \$256,223, administration of \$164,957, salaries and benefits of \$60,778, investor relations and promotions of \$30,326 and accretion and interest on convertible debentures of \$18,705.
- (8) Net loss of \$588,260 included administration of \$219,923, salaries and benefits of \$138,514, research and development of \$117,093, investor relations and promotions of \$74,076 and accretion and interest on convertible debentures of \$18,443.
- (9) Basic and fully diluted.

## Discussion of Operations

### Nine months ended September 30, 2019, compared to the nine months ended September 30, 2018

For the nine months ended September 30, 2019, the Corporation's net loss was \$10,625,314 compared to a net loss of \$6,820,145 for the nine months ended September 30, 2018. The increase in net loss of \$3,805,169 is a result of the following:

- Share-based compensation increased to \$2,677,541 for the nine months ended September 30, 2019, compared to \$757,285 for the nine months ended September 30, 2018. The increase is the result of the vesting of certain stock options granted during the year ended December 31, 2018 and additional grants in the nine months ended September 30, 2019 versus certain stock options granted during the three and nine months ended September 30, 2018.
- Research and development increased to \$2,498,953 for the nine months ended September 30, 2019, compared to \$1,251,508 for the nine months ended September 30, 2018. During the nine months ended September 30, 2019, the Corporation incurred higher costs associated with the scale-up of manufacturing of CardiolRx. As well, the Corporation incurred increased research and development costs related to basic science and preclinical studies.
- Administration expense increased to \$2,227,632 for the nine months ended September 30, 2019, compared to \$1,203,651 for the nine months ended September 30, 2018. During the nine months ended September 30, 2019, the Corporation's operations increased significantly following the completion of the Corporation's IPO, resulting in increased costs related to insurance, office and computer expenses, director fees, professional fees and travel. This increase was partially offset by not incurring costs related to preparing for the IPO, which were incurred in the nine months ended September 30, 2018.
- Investor relations and promotions increased to \$1,813,501 for the nine months ended September 30, 2019, compared to \$152,550 for the nine months ended September 30, 2018. During the nine months ended September 30, 2019, the Corporation incurred higher costs on investor relations and promotion as a result of being a newly listed public company, as well as costs related to the Corporation's upcoming launch of CardiolRx.
- Salaries and benefits increased to \$1,385,959 for the nine months ended September 30, 2019, compared to \$787,032 for the nine months ended September 30, 2018. The increase is the result of the Corporation hiring additional employees at increased salary levels in the current period due to the increased level of operations.
- Accretion on convertible debentures decreased to \$621 for the nine months ended September 30, 2019, compared to \$394,473 for the nine months ended September 30, 2018. The decrease is the result of the debentures being converted on the IPO and in January 2019.
- Change in derivative liability decreased to \$nil for the nine months ended September 30, 2019, compared to \$2,246,688 for the nine months ended September 30, 2018. The decrease is the result of the derivative liability being settled on the IPO.

**Three months ended September 30, 2019, compared to the three months ended September 30, 2018**

For the three months ended September 30, 2019, the Corporation's net loss was \$3,491,816 compared to a net loss of \$4,910,232 for the three months ended September 30, 2018. The decrease in net loss of \$1,418,416 is a result of the following:

- Research and development increased to \$1,237,727 for the three months ended September 30, 2019, compared to \$447,023 for the three months ended September 30, 2018. During the three months ended September 30, 2019, the Corporation incurred higher costs associated with the scale-up of manufacturing of CardiolRx. As well, the Corporation incurred increased research and development costs related to basic science and preclinical studies.

- Administration expense increased to \$815,102 for the three months ended September 30, 2019, compared to \$716,192 for the three months ended September 30, 2018. During the three months ended September 30, 2019, the Corporation's operations increased significantly following the completion of the Corporation's IPO, resulting in increased costs related to insurance, office and computer expenses, director fees, professional fees, and travel. This increase was partially offset by not incurring costs related to preparing for the IPO, which were incurred in the nine months ended September 30, 2018.
- Share-based compensation decreased to \$551,977 for the three months ended September 30, 2019, compared to \$757,285 for the three months ended September 30, 2018. The decrease is the result of the vesting of certain stock options granted during the year ended December 31, 2018 and additional grants in the nine months ended September 30, 2019. This compares to certain stock options granted during the three months ended September 30, 2018.
- Investor relations and promotions increased to \$459,473 for the three months ended September 30, 2019, compared to \$81,187 for the three months ended September 30, 2018. During the three months ended September 30, 2019, the Corporation incurred higher costs on investor relations and promotion as a result of being a newly listed public company, as well as costs related to the Corporation's upcoming launch of CardiolRx.
- Accretion on convertible debentures decreased to \$nil for the three months ended September 30, 2019, compared to \$267,727 for the three months ended September 30, 2018. The decrease is the result of the debentures being converted on the IPO and in January 2019.
- Change in derivative liability decreased to \$nil for the three months ended September 30, 2019, compared to \$2,246,688 for the three months ended September 30, 2018. The decrease is the result of the derivative liability being settled on the IPO.

## **Capital Management**

The Corporation manages its capital to ensure sufficient financial flexibility to achieve the ongoing business objectives including research activities, funding of future growth opportunities and pursuit of acquisitions.

The Corporation monitors its capital structure and makes adjustments according to market conditions in an effort to meet its objectives given the current outlook of the business and industry in general. The Corporation may manage its capital structure by issuing new shares, repurchasing outstanding shares, adjusting capital spending, or disposing of assets. The capital structure is reviewed by Management and the Board of Directors on an ongoing basis.

The Corporation considers its capital to be total shareholders' equity, comprising share capital, warrants, contributed surplus, and the equity portion of convertible debentures less accumulated deficit which at September 30, 2019, totalled \$16,645,500 (December 31, 2018 – \$22,274,159).

The Corporation manages capital through its financial and operational forecasting processes. The Corporation reviews its working capital and forecasts its future cash flows based on operating expenditures, and other investing and financing activities. The forecast is updated based on activities related to its research programs. Information is provided to the Board of Directors.

As the Corporation does not have a credit facility, the Corporation is not currently subject to any capital requirements imposed by a lending institution or regulatory body. The Corporation expects that its capital resources will be sufficient to discharge its liabilities as of the current statement of financial position date.

## **Off-Balance-Sheet Arrangements**

As of the date of this MD&A, the Corporation does not have any off-balance-sheet arrangements that have, or are reasonably likely to have, a current or future effect on the results of operations or financial condition of the Corporation, including, and without limitation, such considerations as liquidity and capital resources.

## **Liquidity and Financial Position**

At September 30, 2019, Cardiol had \$10,104,127 in cash and cash equivalents (December 31, 2018 – \$16,731,500).

At September 30, 2019, accounts payable and accrued liabilities were \$1,459,919 (December 31, 2018 – \$2,141,398). The Corporation's cash and cash equivalents balances as at September 30, 2019 and December 31, 2018 are sufficient to pay these liabilities.

As at September 30, 2019, the Corporation had convertible debentures payable with an aggregate principal amount of \$nil (December 31, 2018 - \$400,000). The \$400,000 was converted into 2,700,000 common shares in January 2019.

The Corporation currently has no operating revenues and therefore must utilize its funds from financing transactions to maintain its capacity to meet ongoing operating activities.

As of September 30, 2019, December 31, 2018 and to the date of this MD&A, the cash resources of Cardiol are held with one Canadian chartered bank. The Corporation has no variable interest rate debt and its credit and interest rate risk is minimal. Accounts payable and accrued liabilities are short-term and non-interest-bearing.

## **For the 2019 Fiscal Period**

Cash and cash equivalents used in operating activities were \$8,322,192 for the nine months ended September 30, 2019. Operating activities were affected by a net loss of \$10,625,314 and the net change in non-cash working capital balances of \$(481,537) offset partially by non-cash adjustments of \$2,784,659. Non-cash adjustments mainly consisted of \$2,677,541 for share-based compensation. Non-cash working capital was the result of a decrease in accounts payable and accrued liabilities of \$681,479 and an increase in inventory of \$1,118,983. This was partially offset by a decrease in prepaid inventory of \$1,261,326.

Cash and cash equivalents used in investing activities were \$346,382 for the nine months ended September 30, 2019. This pertained to the purchase of property and equipment.

Cash and cash equivalents provided by financing activities were \$2,041,201 for the nine months ended September 30, 2019, which represents net proceeds from the over-allotment portion of the IPO and the exercise of warrants, partially offset by the payment of lease liability.

## **Use of Working Capital**

As of September 30, 2019, Cardiol's working capital was \$15,689,802. Based on current projections, Cardiol believes that this amount is sufficient to meet its planned development activities for more than 12 months as described in the "Outlook" section above.

The Corporation has material commitments and obligations for cash resources set out below.

<b>Contractual Obligations</b>	<b>Total (\$)</b>	<b>Up to 1 year (\$)</b>	<b>1 – 3 years (\$)</b>	<b>4 – 5 years (\$)</b>	<b>After 5 years (\$)</b>
Amounts payable and other liabilities	1,459,919	1,459,919	Nil	Nil	Nil
Office lease <sup>(1)</sup>	513,313	125,933	208,675	178,705	Nil
Consulting agreements	594,757	594,757	Nil	Nil	Nil
Contract research	124,770	124,770	Nil	Nil	Nil
<b>Total</b>	<b>2,692,759</b>	<b>2,305,379</b>	<b>208,675</b>	<b>178,705</b>	<b>Nil</b>

Note:

(1) The Corporation has leased premises from third parties.

### Related-Party Transactions

(a) The Corporation entered into the following transactions with related parties:

#### For the 2019 Fiscal Period

- (i) Included in research and development expense is \$673,658 and \$1,037,621, respectively, for the three and nine months ended September 30, 2019 (three and nine months ended September 30, 2018 - \$141,100 and \$178,100, respectively) paid to a company, Dalton Chemical Laboratories, Inc. operating as Dalton, that is related to a director (Peter Pekos). Mr. Pekos is also the President and CEO of Dalton. As at September 30, 2019, \$524,181 (December 31, 2018 - \$9,852) was owed to this company and this amount was included in accounts payable and accrued liabilities and \$65,973 and \$35,040 (December 31, 2018 - \$nil) was paid to this company and was included in prepaid expenses and inventory, respectively. Cardiol entered into an exclusive master services agreement with Dalton for the exclusive supply of pharmaceutical cannabidiol, and Cardiol has subcontracted the manufacturing of its drug product candidates to Dalton.
- (ii) Included in administration is \$60,000 and \$170,000, respectively, for the three and nine months ended September 30, 2019 (three and nine months ended September 30, 2018 - \$40,000 and \$105,000, respectively) for corporate advisory services, paid to a company (Fission Creative Solutions Inc., formerly known as Punchcast Inc.) related to a director (Terry Lynch). Fission Creative Solutions Inc. is controlled by a son of Terry Lynch. The Corporation has entered into an agreement with Fission Creative Solutions Inc. for corporate advisory services as at September 30, 2019. As at September 30, 2019, \$20,000 (December 31, 2018 - \$11,300) is included in prepaid expenses.
- (iii) Included in administration is \$nil (three and nine months ended September 30, 2018 - \$50,238 and \$130,238, respectively) for Chief Financial Officer, accounting, and other administrative services, paid to a company (Ian S. Hulbert Professional Corporation) controlled by the former Chief Financial Officer of the Corporation. As at September 30, 2019, \$nil (December 31, 2018 - \$9,900) was owed to this company and this amount was included in accounts payable and accrued liabilities. The Corporation has no ongoing contractual commitment with Ian S. Hulbert Professional Corporation.
- (iv) Key management personnel are those persons having authority and responsibility for planning, directing, and controlling the activities of the Corporation directly or indirectly, including any Directors (executive and non-executive) of the Corporation. Remuneration of Directors and key management personnel of the Corporation, except as noted in (a) above, was as follows:

	Three months ended		Nine months ended	
	September 30, 2019 (\$)	September 30, 2018 (\$)	September 30, 2019 (\$)	September 30, 2018 (\$)
Salaries and benefits	281,375	232,509	854,209	546,176
Share-based payments	245,501	695,300	1,323,603	695,300
	<b>526,876</b>	<b>927,809</b>	<b>2,177,812</b>	<b>1,241,476</b>

As at September 30, 2019, \$36,007 (December 31, 2018 - \$134,138) was owed to key management personnel and this amount was included in accounts payable and accrued liabilities.

### Critical Accounting Judgments, Estimates, and Assumptions

The preparation of the Financial Statements requires Management to make certain estimates, judgments, and assumptions that affect the reported amounts of assets and liabilities at the date of the Financial Statements and reported amounts of expenses during the reporting period. Actual outcomes could differ from these estimates. The Financial Statements include estimates that, by their nature, are uncertain. The impacts of such estimates are pervasive throughout the Financial Statements and may require accounting adjustments based on future occurrences. Revisions to accounting estimates are recognized in the period in which the estimate is revised and future periods if the revision affects both current and future periods. These 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.

#### Critical accounting estimates

Significant assumptions about the future that Management has made that could result in a material adjustment to the carrying amounts of assets and liabilities, in the event that actual results differ from assumptions made, relate to, but are not limited to, the following:

- The inputs used in the Black-Scholes valuation model that were based on unobservable assumptions when the Corporation was private at the time of issuance of the equity instruments (share price and volatility) in accounting for share-based payment transactions. Share-based payments are valued on the date of grant;
- The valuation of the income tax non-current asset would increase if there was virtual certainty that the tax benefit of net operating losses could be applied to future periods' taxable income.
- The valuation of the income tax current asset would increase if there was virtual certainty of realizing the tax benefit from Canadian investment tax credits ("ITCs") applicable to Canadian qualifying scientific research and experimental development ("SRED"). Virtual certainty has not been obtained for the 2018 SRED ITC claim because the refund has not been received. Management estimates that the 2018 claim, once received, will be approximately \$300,000.
- Intangible assets are comprised of the exclusive global license. Intangible assets are initially stated at cost, less accumulated amortization and accumulated impairment losses. Intangible assets with finite useful lives are amortized over their estimated useful lives. The exclusive global license's useful life is 9 years.

#### Critical accounting judgments

- Management applied judgment in determining the functional currency of the Corporation as Canadian dollars;
- Management's assessment that no indicators of impairment exist for intangible assets, based on the facts and circumstances that existed during the period; and
- Management applied judgment in determining the allocation of IPO costs between share issuance costs and listing expense.

## Change in accounting policies

IFRS 16 - Leases ("IFRS 16") was issued on January 13, 2016 and replaces IAS 17 – Leases, as well as some lease related interpretations. With certain exceptions for leases under twelve months in length or for assets of low value, IFRS 16 states that upon lease commencement a lessee recognizes a right-of-use asset and a lease liability. The right-of-use asset is initially measured at the amount of the liability plus any initial direct costs. After lease commencement, the lessee shall measure the right-of-use asset at cost less accumulated depreciation and accumulated impairment. A lessee shall either apply IFRS 16 with full retrospective effect or alternatively not restate comparative information but recognize the cumulative effect of initially applying IFRS 16 as an adjustment to opening equity at the date of initial application. IFRS 16 requires that lessors classify each lease as an operating lease or a finance lease. A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership of an underlying asset. Otherwise it is an operating lease. At January 1, 2019, the Corporation adopted these amendments and there was no impact on transition on the Corporation's unaudited condensed interim financial statements as the Corporation elected to apply IFRS 16 to short-term leases less than twelve months in length. See note 5 of the Financial Statements for the current period impact of IFRS 16.

## Share Capital

Other than as described below, as of the date of this MD&A, there are no equity or voting securities of the Corporation outstanding, and no securities convertible into, or exercisable or exchangeable for, voting or equity securities of the Corporation.

As of the date of this MD&A, the outstanding capital of the Corporation includes 25,877,686 issued and outstanding common shares, 1,020,000 Meros Special Warrants convertible automatically into common shares (upon the Corporation achieving the Meros Milestone) for no additional consideration pursuant to the Meros License Agreement, 400,000 common shares issuable to Dalton if Dalton meets certain performance objectives, and stock options and warrants as shown below:

### Stock Options

<b>Expiry date</b>	<b>Exercise price (\$)</b>	<b>Options outstanding</b>	<b>Options exercisable</b>
July 24, 2020	5.34	87,500	75,000
October 29, 2021	3.28	90,000	-
January 24, 2024	5.34	100,000	75,000
October 15, 2024	3.23	160,000	-
August 16, 2025	5.00	200,000	200,000
August 30, 2025	5.00	580,000	206,670
January 2, 2026	4.30	150,000	150,000
January 24, 2026	5.34	60,000	-
April 1, 2026	5.77	140,000	-
April 4, 2026	5.42	60,000	-
<b>Total</b>		<b>1,627,500</b>	<b>706,670</b>

## Warrants

<b>Expiry date</b>	<b>Exercise price (\$)</b>	<b>Warrants outstanding</b>
December 20, 2019	5.00	112,560
January 18, 2020	5.00	13,482
December 20, 2020	6.50	3,374,544
August 31, 2022	4.00	824,000
<b>Total</b>		<b>4,324,586</b>

## **Financial Instruments**

### **Recognition**

The Corporation recognizes a financial asset or financial liability on the statement of financial position when it becomes party to the contractual provisions of the financial instrument. Financial assets are initially measured at fair value, and are derecognized either when the Corporation has transferred substantially all the risks and rewards of ownership of the financial asset, or when cash flows expire. Financial liabilities are initially measured at fair value and are derecognized when the obligation specified in the contract is discharged, cancelled or expired.

A write-off of a financial asset (or a portion thereof) constitutes a derecognition event. A write-off occurs when the Corporation has no reasonable expectations of recovering the contractual cash flows on a financial asset.

### **Classification and Measurement**

The Corporation determines the classification of its financial instruments at initial recognition. Financial assets and financial liabilities are classified according to the following measurement categories:

- those to be measured subsequently at fair value, either through profit or loss (“FVTPL”) or through other comprehensive income (“FVTOCI”); and,
- those to be measured subsequently at amortized cost.

The classification and measurement of financial assets after initial recognition at fair value depends on the business model for managing the financial asset and the contractual terms of the cash flows. Financial assets that are held within a business model whose objective is to collect the contractual cash flows, and that have contractual cash flows that are solely payments of principal and interest on the principal outstanding, are generally measured at amortized cost at each subsequent reporting period. All other financial assets are measured at their fair values at each subsequent reporting period, with any changes recorded through profit or loss or through other comprehensive income (which designation is made as an irrevocable election at the time of recognition).

After initial recognition at fair value, financial liabilities are classified and measured at either:

- amortized cost;
- FVTPL, if the Corporation has made an irrevocable election at the time of recognition, or when required (for items such as instruments held for trading or derivatives); or,
- FVTOCI, when the change in fair value is attributable to changes in the Corporation’s credit risk.

The Corporation reclassifies financial assets when and only when its business model for managing those assets changes. Financial liabilities are not reclassified.



Transaction costs that are directly attributable to the acquisition or issuance of a financial asset or financial liability classified as subsequently measured at amortized cost are included in the fair value of the instrument on initial recognition. Transaction costs for financial assets and financial liabilities classified at fair value through profit or loss are expensed in profit or loss.

The Corporation's financial asset consists of cash and cash equivalents and interest receivable, which are classified and measured at amortized cost. The Corporation's financial liabilities consist of accounts payable and accrued liabilities and convertible debt, which are classified and measured at amortized cost.

### **Fair Value**

The Corporation provides information about its financial instruments measured at fair value at one of three levels according to the relative reliability of the inputs used to estimate the fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The three levels of the fair value hierarchy are as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: inputs other than quotes prices included in Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices).
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The Corporation's financial instruments measured at fair value, which consisted of the derivative liability allocated to share capital on the IPO, was considered level one in the fair value hierarchy and was measured at the IPO price.

### **Financial Instrument Risks**

The Corporation's activities expose it to a variety of financial risks: credit risk, liquidity risk, and market risk (including interest rate and foreign currency risk). These financial risks are in addition to the risks set out under "Risk Factors".

Risk management is carried out by the Corporation's Management team under policies approved by the Board of Directors. The Board of Directors also provides regular guidance for overall risk management.

There were no changes to credit risk, liquidity risk, or market risk for the 2019 Fiscal Period.

#### **Credit risk**

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. The Corporation's financial instruments that are exposed to concentrations of credit risk relate primarily to cash and cash equivalents and interest receivable.

The Corporation mitigates its risk by maintaining its funds with large reputable financial institutions, from which Management believes the risk of loss to be minimal. Interest receivable relates to guaranteed investment certificates and cash balances held with large reputable financial institutions. The Corporation's Management considers that all the above financial assets are of good credit quality.

#### **Liquidity risk**

Liquidity risk is the risk that the Corporation encounters difficulty in meeting its obligations associated with financial liabilities. Liquidity risk includes the risk that, as a result of operational liquidity requirements, the Corporation will not have sufficient funds to settle a transaction on the due date; will be forced to sell financial assets at a value which is less than what they are worth; or may be unable to settle or recover a financial asset. Liquidity risk arises from accounts payable and accrued liabilities and commitments. The Corporation limits its exposure to this risk by closely monitoring its cash flow.

## Market risk

Market risk is the risk of loss that may arise from changes in market factors, such as interest rates and foreign exchange rates.

### (a) Interest rate risk

The Corporation currently does not have any short-term or long-term debt that is variable interest bearing and, as such, the Corporation's current exposure to interest rate risk is minimal.

### (b) Foreign currency risk

Foreign exchange risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in the foreign exchange rates. The Corporation enters into foreign currency purchase transactions and has assets that are denominated in foreign currencies and thus is exposed to the financial risk of earnings fluctuations arising from changes in foreign exchange rates and the degree of volatility of these rates. The Corporation does not currently use derivative instruments to reduce its exposure to foreign currency risk.

The Corporation holds balances in U.S. dollars which could give rise to exposure to foreign exchange risk. Sensitivity to a plus or minus 10% change in the foreign exchange rate of the U.S. dollar against the Canadian dollar would affect the reported loss and comprehensive loss by approximately \$164,000 (December 31, 2018 - \$285,000).

## Commitments and Contingency

(i) The Corporation has leased premises from third parties. The minimum committed lease payments as at September 30, 2019, which include the lease liability payments, are as follows:

<b>Fiscal year</b>	
2019	\$ 49,555
2020	102,319
2021	103,761
2022	105,780
2023	107,222
Thereafter	44,676
<b>Total</b>	<b>\$ 513,313</b>

(ii) The Corporation has signed various agreements with consultants to provide services. Under the agreements, the Corporation has the following remaining commitments.

<b>Fiscal year</b>	
2019	\$ 555,174
2020	39,583
<b>Total</b>	<b>\$ 594,757</b>

(iii) Pursuant to the terms of agreements with various other contract research organizations, the Corporation is committed for contract research services for 2019 at a cost of approximately \$124,770.

## Breakdown of Expensed Research and Development

	Three months ended		Nine months ended	
	September 30, 2019 (\$)	September 30, 2018 (\$)	September 30, 2019 (\$)	September 30, 2018 (\$)
Contract research	635,263	207,430	1,236,012	814,610
Wages	67,807	81,221	161,269	241,526
Supplies	124,545	141,100	505,820	178,100
Regulatory	410,112	17,272	595,852	17,272
	<b>1,237,727</b>	<b>447,023</b>	<b>2,498,953</b>	<b>1,251,508</b>

## Breakdown of Operating Expenses

	Three months ended		Nine months ended	
	September 30, 2019 (\$)	September 30, 2018 (\$)	September 30, 2019 (\$)	September 30, 2018 (\$)
Administration	815,102	716,192	2,227,632	1,203,651
Depreciation of property and equipment	18,404	1,995	37,089	4,675
Amortization of intangible assets	21,111	21,111	63,333	63,333
Accretion and interest on convertible debentures	-	267,727	621	394,473
Investor relations and promotions	459,473	81,187	1,813,501	152,550
Salaries and benefits	459,037	410,912	1,385,959	787,032
Transfer agent and regulatory	21,152	-	132,535	-
Share-based compensation	551,977	757,285	2,677,541	757,285
	<b>2,346,256</b>	<b>2,256,409</b>	<b>8,338,211</b>	<b>3,362,999</b>

## Breakdown of Intangible Assets

	As at September 30, 2019 (\$)	As at December 31, 2018 (\$)
Exclusive global license agreement	767,228	767,228
Accumulated amortization	(197,983)	(134,650)
<b>Carrying value</b>	<b>569,245</b>	<b>632,578</b>

## Internal Controls Over Financial Reporting

In accordance with National Instrument 52-109 – Certification of Disclosure in Issuers’ Annual and Interim Filings, Management is responsible for establishing and maintaining adequate Disclosure Controls and Procedures (“DCP”) and Internal Control Over Financial Reporting (“ICFR”). Management has designed DCP and ICFR based on the 2013 Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”), with the objective of providing reasonable assurance that the Corporation’s financial reports and information, including the Corporation’s Financial Statements and MD&A were prepared in accordance with IFRS.

The CEO and CFO have concluded that the design of DCP and ICFR were adequate and to provide such assurance as at September 30, 2019.

## **Limitations of Controls and Procedures**

The Corporation's Management, including the CEO and CFO, believes that any DCP or ICFR, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, they cannot provide absolute assurance that all control issues and instances of fraud, if any, within the Corporation have been prevented or detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by unauthorized override of the control. The design of any control system also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Accordingly, because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

## **Risk Factors**

An investment in the securities of the Corporation is highly speculative and involves numerous and significant risks. Such investment should be undertaken only by investors whose financial resources are sufficient to enable them to assume these risks. Prospective investors should carefully consider the risk factors that have affected, and which in the future are reasonably expected to affect, the Corporation and its financial position. Please refer to the section entitled "Risks and Uncertainties" in the Corporation's MD&A for the financial year ended December 31, 2018 (available on SEDAR at [www.sedar.com](http://www.sedar.com)).