CARDIOL THERAPEUTICS INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

THREE AND SIX MONTHS ENDED JUNE 30, 2022

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 six months ended June 30, 2022 (the "2022 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 years ended December 31, 2021 and 2020 and the unaudited condensed interim consolidated financial statements for the three and six months ended June 30, 2022 ("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 August 10, 2022. 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 August 10, 2022 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 relates 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 anticipated cash needs, and the need for additional financing;
- our development of oral cannabidiol for commercialization;
- our ability to develop new routes of administration of cannabidiol, including parenteral, for commercialization;
- our ability to develop new formulations of cannabidiol for commercialization;
- the successful development and commercialization of our current product candidates and the addition of future products;
- the ability for our drug delivery technologies to deliver cannabinoids and other anti-inflammatory drugs to inflamed and/or fibrotic tissue;
- our intention to build a pharmaceutical brand and cannabidiol products focused on addressing inflammation and fibrosis in heart disease, including acute myocarditis, recurrent pericarditis, and chronic heart failure;
- the expected medical benefits, viability, safety, efficacy, effectiveness and dosing of cannabidiol;
- the progression of the COVID-19 pandemic, as well as the evolution, spread and impact of SARS-CoV-2 variants, and the extent of vaccine uptake, compliance, and effectiveness against such variants
- patents and intellectual property, including, but not limited to, our (a) ability to procure, defend, and/or enforce our intellectual property relating to our drugs, drug formulations, routes of administration, drug candidates, and associated uses, methods, and/or processes, and (b) freedom to operate;
- 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 dividend 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 we believe 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 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, initiate, and complete clinical trials, including the high cost, uncertainty, and delay of clinical trials, and additional costs associated with any failed clinical trials;
- the uncertainty our investigational products will have a therapeutic benefit in the clinical indications we are pursuing;
- potential equivocal or negative results from clinical trials and their adverse impacts on our future commercialization efforts;
- 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;
- management of additional regulatory burdens;
- volatility in the market price for our securities;
- failure to protect and maintain and the consequential loss of intellectual property rights;
- third-party claims relating to misappropriation by the Corporation 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 early-stage research regarding the medical benefits, viability, safety, efficacy, and dosing of cannabidiol;
- 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 production and selling 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 our products;
- 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 our 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 and warrants by existing shareholders causing the market price for the common shares and warrants to fluctuate;
- the issuance of common shares in the future causing dilution; and
- the impact of the novel coronavirus ("COVID-19") pandemic on operations, including the conduct and completion of clinical trials.

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

Information contained in forward-looking information in this MD&A is provided as of August 10, 2022, 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". On May 12, 2021, warrants arising from a "bought deal" short form prospectus offering that closed on the same date, commenced trading on the TSX. These warrants trade under the symbol "CRDL.WT.A". On August 10, 2021, the Corporation's common shares commenced trading on the Nasdaq Capital Market ("Nasdaq") under the symbol "CRDL".

The Corporation is a clinical-stage life sciences company focused on the research and clinical development of cannabidiol as an anti-inflammatory and anti-fibrotic therapy for the treatment of cardiovascular disease ("CVD"). The Corporation's lead product candidate, CardiolRx, is a pharmaceutically produced oral cannabidiol formulation that is being clinically developed for use in cardiovascular medicine. Extensive pre-clinical investigations in models of CVD have demonstrated anti-fibrotic activity of cannabidiol, as well as anti-inflammatory, anti-ischemic, and anti-arrhythmic actions. In experimental models of heart failure and cardiac injury, cannabidiol has also been shown to be cardioprotective by attenuating cardiac hypertrophy, fibrosis, and the production markers of cardiac re-modelling.

CardiolRx is currently being evaluated in a Phase II/III multi-national, randomized, double-blind, placebo-controlled study (the LANCER trial). LANCER is designed to evaluate the efficacy and safety of CardiolRx as a cardioprotective therapy to reduce major cardiovascular and respiratory events in patients hospitalized with COVID-19 who have a prior history of, or risk factors for, CVD, and to investigate the influence CardiolRx has on symptomatic status and key biomarkers associated with heart disease. It is now recognized that the impact of SARS-CoV-2 infection that causes COVID-19 is not limited to the pulmonary system. People who have had COVID-19 have an increased risk and burden for adverse cardiovascular outcomes (such as acute myocardial infarction, dysrhythmias, pulmonary embolism, pericarditis, myocarditis, stroke, and heart failure) up to one year following their COVID-19 diagnosis.

The Corporation has also received Investigational New Drug Application ("IND") authorization by the United States Food and Drug Administration ("FDA") to conduct a Phase II multi-national, randomized, double-blind, placebo-controlled trial designed to evaluate the efficacy and safety of CardiolRx in acute myocarditis (the ARCHER trial). This disease remains an important cause of acute and fulminant heart failure and is a leading cause of sudden cardiac death in people less than 35 years of age. Although viral causes of myocarditis are the most common, myocarditis can result from a broad range of infections and can be caused by certain drugs, including chemo-therapeutic agents used to treat several common cancers. Myocarditis can also manifest as post-acute sequelae of SARS-CoV-2 infection and,

more recently, has been reported as a rare complication associated with certain vaccines for COVID-19. The Corporation believes there is a significant opportunity to develop CardiolRx as an orphan drug for the treatment of acute myocarditis, for which there is currently no accepted standard of care.

The Corporation has also received an IND authorization by the FDA to conduct a Phase II open-label pilot study designed to evaluate the tolerance and safety of CardiolRx in patients with recurrent pericarditis. The study will also assess the improvement in objective measures of disease, and during an extension period, assess the feasibility of weaning concomitant background therapy including corticosteroids, while taking CardiolRx. Recurrent pericarditis is an orphan disease in the United States, thereby making CardiolRx eligible for orphan drug status under the FDA's Orphan Drug Designation program. Pericarditis refers to inflammation of the pericardium – the membrane, or sac, that surrounds the heart. Symptoms include debilitating chest pain, shortness of breath, and fatigue, which result in physical limitations, reduced quality of life, emergency department visits and hospitalizations. Causes of pericarditis can include infection, systemic disorders such as autoimmune and inflammatory diseases, cancer, and post-cardiac injury syndromes. Although generally self-limited and not life threatening, acute pericarditis is diagnosed in 0.2% of all cardiovascular in-hospital admissions and is responsible for 5% of emergency room admissions for chest pain in North America and Western Europe. Recurrent pericarditis is the reappearance of symptoms after a symptom-free period of at least 4 – 6 weeks following an episode of acute pericarditis. These recurrences appear in 15% to 30% of acute cases and usually within 18 months. Further, up to 50% of patients with a recurrent episode of pericarditis experience more recurrences.

In addition, the Corporation is developing a subcutaneous cannabidiol formulation for the treatment of inflammation and fibrosis in the heart that is associated with the development and progression of heart failure. Heart failure is estimated to affect 64 million people globally and remains a leading cause of death and hospitalization, with associated annual healthcare costs in the U.S. alone exceeding $30 billion.

Operations Highlights

During the 2022 Fiscal Period

(i) During the 2022 Fiscal Period, the Corporation granted 395,000 stock options to certain consultants and directors of the Corporation. Each option allows the holder to acquire one common share of the Corporation at exercise prices between $1.46 and $2.18 with expiry dates between January 11, 2027, and May 12, 2027. These options vest one-third on each anniversary date.

(ii) In January 2022, the Corporation announced the appointment of its Scientific Advisory Board (See "Clinical Highlights - Scientific Advisory Board").

(iii) In March 2022, the Corporation announced the appointment of Jennifer M. Chao to its Board of Directors. Ms. Chao has also been appointed Chair of the Corporate Governance and Compensation Committee. Iain Chalmers has stepped down from the Board of Directors to accommodate Ms. Chao's appointment.

Ms. Chao has over 25 years of experience in the biotech and life sciences industries focused primarily on finance and corporate strategy. She is Managing Partner of CoreStrategies Management, LLC, a company she founded in 2008 to provide transformational corporate and financial strategies to biotech/life science companies for maximizing core valuation. She currently serves on the Board of Directors of Endo International ("Endo") and is a member of the Audit Committee and Compliance Committee. Prior to joining Endo, Ms. Chao served as Chairman of the Board of BioSpecifics Technologies Corp. (BioSpecifics) from October 2019 until its acquisition by Endo for approximately US $660 million in December 2020. She also served as Chair of BioSpecifics' Compensation Committee and as a member of the Audit Committee, Strategy Committee, Intellectual Property Committee, and Nominating and Corporate Governance Committee from 2015 to 2020.

Additionally, from 2004 to 2008, Ms. Chao was Managing Director and Senior Lead Biotechnology Securities Analyst at Deutsche Bank, responsible for U.S. large- and small- to mid-cap biotechnology companies with global client coverage; and was known for differentiated fundamentals securities analysis and high visibility coverage of game changing technologies, paradigm shifting treatment algorithms, industry trends and portfolio risk/reward management. Prior to that, Ms. Chao served as Managing Director and Senior Lead Biotechnology Analyst at RBC Capital Markets and VP, Senior Biotechnology Analyst at Leerink Swann & Co. Ms. Chao was a research fellow at Massachusetts General Hospital/Harvard Medical School, as a recipient of the BioMedical Research Career Award, and received her B.A. in Politics and Greek Classics from New York University.

(iv) In March 2022, the Corporation incorporated a wholly owned subsidiary, Cardiol Therapeutics USA Inc. ("Cardiol USA"), under the laws of Delaware.

(v) In May 2022, Corporation announced the appointment of Teri Loxam and Chris Waddick to its Board of Directors. Ms. Loxam has also been appointed Chair of the Audit Committee. Dr. Guillermo Torre-Amione has stepped down from the Audit Committee to accommodate Ms. Loxam's appointment.

Teri Loxam has over 25 years of experience in the pharmaceutical, life sciences, and entertainment industries with diverse roles spanning strategy, investor relations, finance, and communications. Ms. Loxam joined Kira Pharmaceuticals (“Kira”) in November 2021 as Chief Operating Officer and Chief Financial Officer. In this role, she oversees finance, operations, and strategic functions for the company. Prior to joining Kira, Ms. Loxam served as Chief Financial Officer at SQZ Biotech (“SQZ”) where she led the company’s financial operations, investor relations and communications/public relations functions. While at SQZ, she was instrumental in helping the company raise over $200M in private and public funding, including taking the company public through an IPO on the NYSE in October 2020. Before joining SQZ, Ms. Loxam served as Sr. Vice President of Investor Relations and Global Communications at Merck. In this role, she led its investor relations and investment community interactions as well as its internal and external communications efforts globally. Prior to Merck, Ms. Loxam was Vice President, Investor Relations for IMAX Corporation, where she reshaped the entertainment company’s investor strategy, helping to convert its investor base and helping the company go public in China with an IPO on the Hong Kong Exchange. Ms. Loxam also spent over a decade at Bristol-Myers Squibb in a variety of roles of increasing responsibility across Strategy, Treasury, and Investor Relations. She started her career as a marine biologist and worked at Sea World of San Diego before making a transition into business. Ms. Loxam is a member of the board of directors of Vaxcyte. She holds an MBA from the University of California, Irvine, and a Bachelor of Science degree in Biology from the University of Victoria, B.C., Canada.

Chris Waddick has over thirty years of experience in financial and executive roles in the biotechnology and energy industries, with substantial knowledge of public company management and corporate governance, and in designing, building, and managing financial processes, procedures, and infrastructure. Mr. Waddick has served as Chief Financial Officer and Corporate Secretary of Cardiol since August 16, 2018. He serves as Executive Vice President and Chief Financial Officer for a private Ontario energy company. Previously, Mr. Waddick spent more than twelve years at Vasogen Inc., a biotechnology company focused on the research and commercial development of novel therapeutics for the treatment of heart failure and other inflammatory conditions. While serving as Chief Financial Officer and Chief Operating Officer, the company grew from start up to an organization employing over 250 employees that established the necessary systems and infrastructure to advance an anti-inflammatory therapy through to the completion of an international multi-center pivotal trial involving 2,500 patients. Vasogen went public on the TSX and the NASDAQ, raising over $200 million to support corporate development and reached a market capitalization of over US$1 billion. Prior to Vasogen, he held progressively senior financial positions at Magna International Inc. and Union Gas Limited. Mr. Waddick is a CPA and earned a business degree from Wilfrid Laurier University and a Master of Business Administration from York University.

(vi) In June 2022, the Corporation announced it has entered into an equity distribution agreement with Canaccord Genuity LLC and Cantor Fitzgerald & Co. (the "Sales Agents") acting as co-agents in connection with the 2022 at-the-market offering program (the "2022 ATM Program"). Under the terms of the 2022 ATM Program, the Corporation may, from time to time, sell common shares having an aggregate value of USD$50,000,000 through the Sales Agents on the Nasdaq Capital Market. As at June 30, 2022, the Corporation has not issued any shares under the 2022 ATM Program.

The timing and extent of the use of the 2022 ATM Program will be at the discretion of the Corporation and the Corporation has no obligation to sell any shares pursuant to the 2022 ATM Program. Accordingly, total gross proceeds from offerings under the 2022 ATM Program could be less than US$50 million. The 2022 ATM Program will be effective until the earlier of the issuance and sale of all of the Offered Shares issuable pursuant to the 2022 ATM Program and March 8, 2024, unless terminated prior to such date by Cardiol or the Sales Agents.

Subsequent to June 30, 2022

(i) In August 2022, the Corporation announced that the first patient has been enrolled in *ARCHER*, the Corporation’s Phase II, multi-center, international, double-blind, randomized, placebo-controlled trial designed to study the safety and tolerability of CardiolRx™, as well as its impact on myocardial recovery, in patients presenting with acute myocarditis.

Clinical Highlights

Phase II/III study – COVID-19 (LANCER)

In September 2020, the FDA authorized the Corporation's IND to commence a Phase II/III, double-blind, placebo-controlled clinical trial investigating the efficacy and safety of CardiolRx, an oral cannabidiol formulation that is pharmaceutically manufactured under cGMP, in 422 hospitalized COVID-19 patients with a prior history of, or risk factors for, CVD.

In December 2020, Cardiol announced the appointment of the contract research organization (the "CRO"), Worldwide Clinical Trials ("Worldwide"), for its Phase II/III trial in high-risk patients hospitalized with COVID-19. Worldwide has been the CRO for multiple international COVID-19 clinical programs and has extensive experience in conducting clinical research focused on cardiovascular disease. With a global footprint, Worldwide provides drug development expertise from early phase to late-stage clinical development, post-approval, and real-world evidence studies; delivering high quality clinical programs designed to support regulatory approvals in multiple jurisdictions. Employing more than 1,900 professionals, Worldwide provides drug development support services in over 60 countries with offices in North and South America, Europe, and Asia.

Cardiol's Phase II/III trial has been designed to evaluate the efficacy, and safety, of CardiolRx as a cardioprotective therapy to reduce major cardiovascular and respiratory events in patients hospitalized, with a confirmed diagnosis of COVID-19, and who have pre-existing CVD and/or significant risk factors for CVD, and to investigate the influence CardiolRx has on symptomatic status and key biomarkers associated with heart disease. The composite primary efficacy endpoint will be the difference between the active and placebo groups in the percentage of patients who develop, during the first twenty-eight days following randomization and first dose of study medication, one or more of several common outcomes in this patient population. These are all-cause mortality, requirement for ICU admission and/or ventilatory support, as well as cardiovascular complications, including the development of heart failure, acute myocardial infarction, myocarditis, stroke, or new sustained or symptomatic arrhythmia.

Patients with COVID-19 primarily present with respiratory symptoms which can progress to bilateral pneumonia and serious pulmonary complications. It is now recognized that the impact of COVID-19 is not limited to the pulmonary system. Individuals with pre-existing CVD or who have risk factors for CVD (such as diabetes, hypertension, obesity, current smokers, abnormal serum lipids, or age greater than 64) are at significantly greater risk of developing serious disease from COVID-19 and experience greater morbidity. Moreover, such COVID-19 patients are at significant risk of developing cardiovascular complications (such as acute myocardial infarction, cardiac arrhythmias, myocarditis, stroke, and heart failure) during the course of their illness. Cardiol believes a therapeutic strategy that limits the number or severity of both pulmonary and cardiovascular complications will improve the socioeconomic burden of this disease.

In March 2022, the Corporation announced it received authorization from the FDA and regulatory agencies in Brazil and Mexico to modify the inclusion criteria for the *LANCER* trial to allow the eligible patient pool to include the following: (i) vaccinated patients; (ii) use of therapies approved for treatment of COVID-19 under emergency use authorization label; and (iii) a prior history of smoking or obesity, both CVD risk factors prevalent in younger patients.

The rationale for using cannabidiol to treat patients with COVID-19 is based on pre-clinical investigations conducted by Cardiol and others in models of cardiovascular disease which have demonstrated anti-fibrotic activity of cannabidiol, as well as anti-inflammatory, anti-ischemic and anti-arrhythmic actions. In experimental models of heart failure and cardiac injury, cannabidiol has also been shown to be cardioprotective by attenuating cardiac hypertrophy, fibrosis, and the production markers of cardiac re-modelling.

The *LANCER* study was designed and will be overseen by an independent Steering Committee, consisting of international thought leaders in cardiovascular disease. Members of the Steering Committee include:

<u>Dennis M. McNamara, MD (Chair)</u>

Dr. Dennis McNamara is a Professor of Medicine at the University of Pittsburgh. He is also the Director of the Center for Heart Failure Research at the University of Pittsburgh Medical Center. Dr. McNamara received his undergraduate/graduate education at Yale University, New Haven, Connecticut, and Harvard Medical School, Boston, Massachusetts, respectively. He completed his internship, residency, and cardiology fellowship at Massachusetts General Hospital in Boston. McNamara's current research interests include etiology and pathogenesis of dilated cardiomyopathies; inflammatory syndromes of cardiovascular disease; myocardial recovery in recent onset non-ischemic primary cardiomyopathy; etiology and management of peripartum cardiomyopathy; and genetic modulation of

outcomes in cardiovascular disease.

Leslie T. Cooper, Jr., MD (Co-Chair)

Dr. Leslie T. Cooper, Jr., is a general cardiologist and the chair of the Department of Cardiovascular Medicine at the Mayo Clinic in Jacksonville, Florida. Dr. Cooper's clinical interests and research focus on clinical and translational studies of rare and undiagnosed cardiomyopathies, myocarditis, and inflammatory cardiac and vascular diseases, such as giant cell myocarditis, cardiac sarcoidosis, and eosinophilic myocarditis. He has published over 130 original peer-reviewed papers, as well as contributing to and editing books on myocarditis. In addition to his clinical and research work, Dr. Cooper is a fellow of the American College of Cardiology, the American Heart Association, the European Society of Cardiology Heart Failure Association, and the Heart Failure Society of America. He is also the founder and former president of the Myocarditis Foundation and continues to serve on its Board of Directors.

Arvind Bhimaraj, MD

Dr. Arvind Bhimaraj is American Board certified in internal medicine, cardiovascular disease and advanced heart failure and transplantation. In addition, he holds Board Certification for Nuclear Cardiology and Adult Echocardiography. He is a member of the Methodist DeBakey Heart and Vascular Center, Houston Methodist Hospital and is currently serving as the Interim Chief of the Division of Heart Failure. His expertise spans the spectrum of heart failure from new onset disease to advanced heart failure. He is also a member of the J.C. Walter Jr. Transplant Center, Houston Methodist Hospital where he cares for patients with mechanical assist devices and heart transplants. He is also the Co-director of the Heart failure Disease Management service and overseas the quality aspects of care for general heart failure at the Houston Methodist hospital. Dr. Bhimaraj has a research interest in non-myocyte cell transitions and its role in cardiac recovery from heart failure. He is the co-director of the Heart failure translational research laboratory, where he oversees his research of the role of endothelial cells in causing scarring in the heart and is actively researching the ability of the heart to heal and recover from heart failure.

Wai Hong Wilson Tang, MD

Dr. Wai Hong Wilson Tang is the Advanced Heart Failure and Transplant Cardiology specialist at the Cleveland Clinic in Cleveland, Ohio. Dr. Tang is also the Director of the Cleveland Clinic's Center for Clinical Genomics; Research Director, and staff cardiologist in the Section of Heart Failure and Cardiac Transplantation Medicine in the Sydell and Arnold Miller Family Heart & Vascular Institute at the Cleveland Clinic. He attended and graduated from Harvard Medical School in 1996, having over 23 years of diverse experience, especially in Advanced Heart Failure and Transplant Cardiology. Dr. Tang is affiliated with many hospitals including the Cleveland Clinic and cooperates with other doctors and physicians in medical groups including The Cleveland Clinic Foundation.

Peter Liu, MD

Dr. Peter Liu is the Chief Scientific Officer and Vice President, Research, of the University of Ottawa Heart Institute, and Professor of Medicine and Physiology at the University of Toronto and University of Ottawa. He was the former Scientific Director of the Institute of Circulatory and Respiratory Health at the Canadian Institutes of Health Research, the major federal funding agency for health research in Canada. Prior to that role, he was the inaugural Director of the Heart & Stroke/Lewar Centre of Excellence in Cardiovascular Research at University of Toronto. Dr. Liu received his MD from the University of Toronto, and postgraduate training at Harvard University. His laboratory investigates the causes and treatments of heart failure, the role of inflammation, and the identification of novel biomarkers and interventions in cardiovascular disease. Dr. Liu has published over 300 peer-reviewed articles in high impact journals and received numerous awards in recognition of his research and scientific accomplishments.

Carsten Tschöpe, MD

Dr. Carsten Tschöpe is Professor of Medicine and Cardiology. Vice Director of the Department of Internal Medicine and Cardiology, Charité Hospital, Freie Universität Berlin. He received his doctorate in medicine in 1993 and has over 140 peer-reviewed publications, including overview and book articles, and 120 international original articles. His research interests include inflammatory cardiomyopathy, diabetic cardiopathy, and ischemic cardiopathy. He also includes diastolic dysfunction, endothelial dysfunction, peptide systems, and experimental and clinical studies in cardiology and stem cells in his research studies. For his outstanding research work, Dr. Tschöpe was awarded the prestigious Arthur Weber Prize by the German Cardiac Society – Cardiovascular Research.

Matthias Friedrich, MD

Dr. Matthias Friedrich earned his MD at the Friedrich-Alexander-University Erlangen/Nuernberg, Germany. He completed his training as an internist and cardiologist at the Charité University Medicine Center, Humboldt University in Berlin. After appointments with the University of Calgary and the Université de Montréal/Montreal Heart Institute, he joined the Departments of Medicine and Diagnostic Radiology as a Full Professor, and also acts as Chief of Cardiovascular Imaging and Scientific Director of the Courtois Cardiovascular Signature Program at the McGill University Health Centre. He also has an appointment with the Department of Medicine at Heidelberg University in Germany. He is staff cardiologist at the Royal Victoria Hospital and an active researcher with a strong interest in novel imaging techniques. He has focused the research activities of his team of 20+ researchers on cardiac MRI of myocardial injury, including acute ischemic and inflammatory conditions. His scientific interest is focused on new approaches for diagnosing cardiovascular disease using Cardiovascular Magnetic Resonance (CMR) Imaging, with a special interest in novel diagnostic approaches to visualize heart disease. He authored or co-authored more than 200 peer-reviewed publications, with more than 20,000 citations. He was the Founding President of the Canadian Society for Cardiovascular Magnetic Resonance and President of the Society for Cardiovascular MR (SCMR). Dr. Friedrich is also Scientific Director of the Courtois Cardiovascular Signature Program, a long-term initiative for developing AI-informed strategies for personalized cardiovascular health management.

Guilherme Oliveira, MD, MBA

Dr. Guilherme Oliveira is a Professor of Medicine and Chairman of Cardiovascular Sciences at the University of South Florida Health Morsani College of Medicine. He is also the Executive Director of the Tampa General Hospital Heart and Vascular Institute, located in Tampa, Florida. Dr. Oliveira received his Doctor of Medicine from Universidade Federal do Rio De Janeiro, Rio De Janeiro, Brazil and completed the Internal Medicine Residency Program at the Mayo Graduate School, Rochester, Minnesota. He served a Fellowship at the Baylor College of Medicine, Houston, Texas, and earned an MBA at the Massachusetts Institute of Technology, Cambridge, Massachusetts. Dr. Oliveira's areas of expertise include advanced heart failure; left ventricular assist devices; onco-cardiology; heart transplantation; and mechanical circulatory support. For his outstanding work, Dr. Oliveira was granted admission into the Fellowship of the American College of Cardiology.

Paolo Caramori, MD, PhD, FSCAI

Dr. Paolo Caramori is currently head of the Division of Cardiovascular Medicine and the Center for Diagnosis and Interventional Treatment at Hospital São Lucas at PUCRS and coordinator of Cardiarte. He also works at Hospital Mãe de Deus and Hospital Moinhos de Vento, in Porto Alegre (RS). He has intense scientific activity, publishing several articles that, to date, have received more than 3,100 international citations. He has supervised nine doctoral theses and 12 master's dissertations. Dr. Caramori graduated in Medicine from the Federal University of Rio Grande do Sul (UFRGS) in 1988. He completed his residency in Internal Medicine and then in Cardiology at Hospital de Clínicas de Porto Alegre, linked to UFRGS, from 1989 to 1992. He obtained his master's degree in Cardiology from UFRGS in 1995. Afterwards, he resided for three years in Toronto (Canada), where he held a Clinical Fellowship in Interventional Cardiology at the Toronto General Hospital, at the University of Toronto. In 1999, he received the title of Doctor of Cardiology and Cardiovascular Sciences.

In January 2021, the Corporation announced the formation of the Data Safety Monitoring Committee (the "DSMC") and the Clinical Endpoint Committee (the "CEC") for the *LANCER* trial. The DSMC comprises independent experts who will assess the patient safety data, and, if needed, critical efficacy endpoints of the trial. In order to do so, the DSMC may review unblinded study information (on a patient level or treatment group level) during the conduct of the trial. After each data review, the DSMC will advise the study Steering Committee with recommendations for protocol modifications, if concerns over safety have developed, or that the study should continue according to the protocol if no concerns are identified. The DSMC will also perform an interim analysis after 200 patients have completed the study, to be certain that the investigational drug is not exposing trial patients to undo risk. Study management will also perform a blinded analysis at this time to determine if the expected number of endpoints have occurred or if the sample size for the study needs to be adjusted so that enough patients will be enrolled to achieve statistical significance.

The DSMC for the *LANCER* trial currently consists of three members:

- **Chair: Dr. Jean Lucien Rouleau** – Professor and Former Dean, University of Montreal and Cardiologist, Montreal Heart Institute. Dr. Rouleau has an international reputation in cardiovascular research, particularly in basic mechanisms and improving the clinical care of patients with heart failure. His publication list includes more than

540 articles and seven book chapters;

- **Statistician: Dr. George Wells** – Professor, School of Epidemiology, Public Health and Preventive Medicine, University of Ottawa and Director, Cardiovascular Research Methods Centre, University of Ottawa Heart Institute. Dr. Wells has worked extensively with governments and non-government research organizations, as well as private pharmaceutical and biotechnology companies. He has been an Investigator in over 300 research projects with research funding exceeding $190 million. Dr. Wells is the author or co-author of over 1,000 published articles; and
- **Dr. John Teerlink** – Professor of Medicine, University of California, San Francisco and Director of Heart Failure and the Echocardiographic Laboratory at the San Francisco Veterans Affairs Medical Center. Dr. Teerlink is actively involved in many acute and chronic heart failure clinical trials, serving on endpoint, data safety monitoring and steering committees for numerous international cardiovascular studies. Among multiple committee positions, he has served on the Acute Heart Failure Committee of the European Society of Cardiology Heart Failure Association and has served on the National Committee on Heart Failure and Transplantation of the American Heart Association, as well as multiple cardiovascular journal Editorial Boards, including as the Guest Editor-in-Chief for JACC:Heart Failure, and as an Associate Editor for the European Journal of Heart Failure. He currently serves as the President-Elect of the Heart Failure Society of America.

The CEC comprises clinical experts in cardiology and Intensive Care and has been established to ensure accurate and consistent assessment of the trial endpoints and/or serious adverse events. In order to ensure an unbiased endpoint assessment, members of the CEC are blinded to treatment assignment. The goal of the CEC is to standardize endpoints and optimize data quality.

The CEC for the *LANCER* trial currently consists of three members:

- **Chair: Dr. Brent Mitchell** – Professor of Cardiac Sciences and Former Director of the Libin Cardiovascular Institute, University of Calgary. Dr. Mitchell completed a Fellowship in Clinical Cardiology at Dalhousie University in Halifax, and a Fellowship in clinical electrophysiology at Stanford University Medical Centre, California. Dr. Mitchell's clinical practice and research interests are in the area of cardiac electrophysiology, particularly in the diagnosis and management of tachyarrhythmias. Dr. Mitchell has published several sentinel papers in the diagnosis and management of serious cardiac arrhythmias;
- **Dr. Maria Rosa Costanzo** – Professor, Rush Medical College and Cardiologist, Advocate Health, Naperville, IL. Dr. Costanzo is Board Certified in Advanced Heart Failure and Cardiac Transplantation. Dr. Costanzo is currently the Medical Director of the Midwest Heart Specialists – Advocate Medical Group Heart Failure and Pulmonary Arterial Hypertension Programs, and Medical Director of the Edward Hospital Center for Advanced Heart Failure. Dr. Costanzo has published nearly 200 peer-reviewed manuscripts and is the author of numerous review papers, monographs, and book chapters; and
- **Dr. Courtney Bennett** – A consultant cardiologist who specializes in Cardiac Critical Care and echocardiography. She is board certified in both Cardiovascular Medicine and Critical Care Medicine and is the current Medical Director of the Cardiac Intensive Care Unit. Her clinical interests include management of acute cardiac emergencies, advancing the care of patients with cardiogenic shock, Ischemic heart disease, myocardial perfusion echocardiography, and point-of-care ultrasound**.** She is an Associate Professor of Medicine in the Mayo Clinic College of Medicine and Science. Dr. Bennett has leadership roles on multiple education committees for both the Cardiovascular Medicine Fellowship and Internal Medicine Residency.

Subject to the manner in which the COVID-19 pandemic progresses such as the seasonality of waves in countries participating in LANCER, as well as the evolution, spread and impact of SARS-CoV-2 variants, as well as the extent of vaccine uptake, compliance, and effectiveness against such variants, the Corporation expects to complete patient enrollment and report top-line data during H1, 2023. Cardiol has budgeted additional costs of approximately USD $9.2 million for study execution and $1.3 million for potential post-study analysis.

Subject to study outcomes, Management intends to review the findings from the *LANCER* study with the FDA to determine what additional studies may be required to support a New Drug Application for CardiolRx. Cardiol may also review study outcomes with prospective development and commercialization partners from the pharmaceutical industry.

Phase II study – Acute myocarditis (ARCHER)

In August 2021, Cardiol received authorization from the FDA for its IND for a Phase II clinical trial of CardiolRx in acute myocarditis. Cardiol's acute myocarditis program has been designed by an independent Steering Committee comprised of thought leaders in cardiology from North America and Europe. The first patient was enrolled in the study in August 2022, and it is expected that patient recruitment will take 12 to 18 months to complete. Cardiol has budgeted additional costs to complete this study to be approximately $11.8 million.

If Cardiol determines that the Phase II study meets its objectives, it currently expects to undertake the next steps of its clinical development program, which would consist of a larger clinical study, the details of which will be determined in conjunction with regulatory agencies discussions. The Corporation expects the completion of this clinical development program, if undertaken, to take at least until 2025 and may involve a commercial partner from the pharmaceutical industry, with research, development, and commercialization costs potentially being shared with its commercial partner. Cardiol relies on CROs, clinical data management organizations, and consultants to assist with the design, conduct, supervision, and monitoring of pre-clinical and clinical studies. The total costs to complete the clinical development program cannot be determined at this stage as they will depend on a variety of factors.

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 immunoglobulin has been trialed but without clear success.

A number of published pre-clinical studies have shown that cannabidiol has anti-inflammatory activities in a range of experimental inflammatory pathologies. In particular, cannabidiol has been shown to attenuate vascular inflammation and fibrosis in the heart in a model of myocarditis. The Corporation’s studies in an experimental animal model of heart failure have shown a prominent anti-fibrotic action of cannabidiol, as well as anti-inflammatory activity. Increasing fibrosis leads to progression of the heart dysfunction. Based upon this evidence, cannabidiol 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 in younger individuals and remains the most common cause of sudden cardiac death in people under 35 years of age. The most recent data from the ‘Global Burden of Disease Study’ suggests that the prevalence of myocarditis is approximately 22/100,000 persons (estimated U.S. patient population of 73,000), qualifying the condition as an orphan disease in the U.S. and in Europe. Cardiol believes that there is a significant opportunity to develop a therapy for acute myocarditis that may be eligible for designation as an orphan drug under the FDA's Orphan Drug Designation and the European Medicines Agency programs.

The Phase II myocarditis study was designed and will be overseen by an independent Steering Committee, consisting of international thought leaders in heart disease. The following members' biographies can be seen under "Phase II/III study – COVID-19 (LANCER)": Dennis McNamara, Leslie Cooper, Matthias Friedrich, Carsten Tschöpe, Arvind Bhimaraj, Peter Liu, and Wai Hong (Wilson) Tang. Other members of the Steering Committee include:

<u>Yaron Arbel, MD</u>

Dr. Yaron Arbel is an attending interventional cardiologist and the director of the CardioVascular Research Center (CVRC) at the Tel Aviv Medical Center. Prof. Arbel has been involved in entrepreneurship for the past 15 years. He has been working as a researcher/advisor/medical director in various fields of medicine: Heart failure (Corassist-diastolic heart failure), interventional cardiology (Angioslide- preventing distal embolization), myocardial infarction (LBT-low level laser activation of bone marrow), medical informatics and wearables (CUBX- contactless hemodynamic assessment). Dr. Arbel graduated from the Faculty of Medicine in Sackler School of Medicine at the Tel Aviv University. He completed his training in Internal Medicine and Cardiology at the Tel Aviv medical center. He also

completed a fellowship in interventional and structural cardiology at Sunnybrook Medical Centre in Toronto, Canada. He has published over 130 articles and has initiated local, national, and international studies. He is a reviewer/board member in over 40 journals.

Edimar Bocchi, MD

Dr. Edimar Alcides Bocchi trained as a cardiologist at the Heart Institute (InCor) Of São Paulo University Medical School and obtained his PhD at the São Paulo University Medical School. Currently, he serves as the Head of Heart Failure Clinics and Heart Failure Team at Heart Institute (Incor) of Hospital das Clinicas of São Paulo University Medical School. His areas of clinical and research interest include heart failure, Chagas heart disease, cardio-oncology, heart transplantation, and exercise in heart failure. He is one of the founders of the Department of Heart Failure of the Brazilian Society of Cardiology. It is a pioneer in the development of heart transplantation in Chagasic cardiomyopathy; nitric oxide and phosphodiesterase type 5 inhibitors in heart failure. Dr. Bocchi is an author of more than 500 publications in peer-reviewed journals, contributed to 70 book chapters, and serves as the national coordinator for several randomized clinical trials, including the BELIEF, COMMANDER, SHIFT, RAD 2401, VICTORIA, DETERMINE, and EMPEROR Trials . Main investigator of the REMADHE trial and group leader of the trial CECCY.

Phase II Open Label Pilot Study – Recurrent Pericarditis

In May 2022, the Corporation announced the FDA has authorized the Corporation's IND to commence a Phase II open-label pilot study designed to evaluate the tolerance and safety of CardiolRx in patients with recurrent pericarditis. The study will also assess the improvement in objective measures of disease, and during an extension period, assess the feasibility of weaning concomitant background therapy including corticosteroids, while taking CardiolRx. Recurrent pericarditis is an orphan disease in the United States, thereby making CardiolRx eligible for orphan drug status under the FDA's Orphan Drug Designation program.

Cardiol's study is expected to enroll 25 patients at major clinical centers specializing in pericarditis in the United States. The study protocol has been designed in collaboration with thought leaders in pericardial disease. The trial's primary efficacy endpoint is the change, from baseline to 8 weeks, in patient-reported pericarditis pain using an 11-point numeric rating scale ("NRS"). The NRS is a validated clinical tool used across multiple conditions with acute and chronic pain, including previous studies of recurrent pericarditis. Secondary endpoints include the pain score after 26 weeks of treatment, and changes in C-reactive protein ("CRP").

Pericarditis refers to inflammation of the pericardium – the membrane, or sac, that surrounds the heart. Symptoms include debilitating chest pain, shortness of breath, and fatigue, which result in physical limitations, reduced quality of life, emergency department visits, and hospitalizations. Causes of pericarditis can include infection (e.g., tuberculosis), systemic disorders such as autoimmune and inflammatory diseases, cancer, and post-cardiac injury syndromes. Based on time of presentation, acute pericarditis is a symptomatic event lasting less than four to six weeks, the diagnosis of which is based on meeting two of four criteria: chest pain; pericardial rub; electrocardiogram changes; and new or worsening pericardial swelling. Elevation of inflammatory markers such as CRP, and evidence of pericardial inflammation by an imaging technique (computed tomography scan or cardiac magnetic resonance) may help the diagnosis and the monitoring of disease activity. Although generally self-limited and not life threatening, acute pericarditis is diagnosed in 0.2% of all cardiovascular in-hospital admissions and is responsible for 5% of emergency room admissions for chest pain in North America and Western Europe.

Recurrent pericarditis is the reappearance of symptoms after a symptom-free period of at least 4 – 6 weeks following an episode of acute pericarditis. These recurrences appear in 15% to 30% of acute cases and usually within 18 months. Further, up to 50% of patients with a recurrent episode of pericarditis experience more recurrences. Standard first-line medical therapy consists of non-steroidal anti-inflammatory drugs or aspirin with or without colchicine. Corticosteroids such as prednisone are second-line therapy in patients with continued recurrence and inadequate response to conventional therapy. Recently, a potent subcutaneously injected interleukin-1 inhibitor was approved by the FDA for patients with recurrent pericarditis; however, this immunosuppressant is primarily used in patients with a third or fourth recurrence.

It is estimated that patient recruitment will take 12 months following the initiation of the clinical trial centers. Cardiol has budgeted additional costs to complete this study to be approximately $3.6 million. If Cardiol determines that the Phase II study meets its objectives, it currently expects to undertake the next steps of its clinical development program, which would consist of a larger clinical study, the details of which will be determined in conjunction with regulatory agencies discussions. The Corporation expects the completion of this clinical development program, if undertaken, to take at least until 2026 and may involve a commercial partner from the pharmaceutical industry, with research, development,

and commercialization costs potentially being shared with this partner. Cardiol relies on CROs, clinical data management organizations, and consultants to assist with the design, conduct, supervision, and monitoring of pre-clinical and clinical studies. The total costs to complete the clinical development program cannot be determined at this stage as they will depend on a variety of factors

The Phase II open-label recurrent pericarditis study was designed with the support of an independent Advisory Committee and key trial investigators, consisting of international thought leaders in cardiovascular disease, including:

- **Study Chair: Allan Klein, MD, CM** – Director, Center for the Diagnosis and Treatment of Pericardial Diseases, and Professor of Medicine, Heart, Vascular and Thoracic Institute, Cleveland Clinic;
- **Antonio Abbate, MD** – Medical Director of Clinical Research Unit in the C. Kenneth and Dianne Wright Center for Clinical and Translational Research at Virginia Commonwealth University;
- **Allen Luis, MBBS, PhD** – Co-Director of the Pericardial Diseases Clinic, Associate Professor of Medicine, Department of Cardiovascular Medicine, at Mayo Clinic Rochester Minnesota;
- **Paul Cremer, MD** – Department of Cardiovascular Imaging, Center for the Diagnosis and Treatment of Pericardial Diseases, Heart, Vascular and Thoracic Institute, Cleveland Clinic;
- **Stephen Nicholls** – Director of Cardiology, Monash Health, Director, Monash Victorian Heart Institute, and Professor of Cardiology, Monash University, Melbourne; and
- **Stefano Toldo, PhD** – Associate Professor School of Medicine, Internal Medicine, Department of Cardiology at Virginia Commonwealth University.

Scientific Advisory Board

Paul M. Ridker, MD, MPH

Dr. Ridker is director of the Center for Cardiovascular Disease Prevention, a translational research unit at Brigham and Women's Hospital (BWH), Boston. A cardiovascular medicine specialist, he is also the Eugene Braunwald Professor of Medicine at Harvard School of Medicine (HMS). Dr. Ridker received his medical degree from HMS and then completed an internal medicine residency and a cardiology fellowship at BWH. Dr. Ridker is board certified in internal medicine. His clinical interests include coronary artery disease and the underlying causes and prevention of atherosclerotic disease. Dr. Ridker is the author of over 900 peer-reviewed publications and reviews, 64 book chapters, and six textbooks related to cardiovascular medicine. His primary research focus has involved inflammatory mediators of heart disease and the molecular and genetic epidemiology of hemostasis and thrombosis, with particular interests in biomarkers for coronary disease, "predictive" medicine, and the underlying causes and prevention of atherosclerotic disease. Notably, Dr. Ridker has been the Principal Investigator or Study Chairman of several large international trials that have demonstrated the role of inflammation in the genesis and management of coronary artery disease. He was included in TIME magazine's list of 100 most influential people of 2004, and between the years 2000 and 2010, Dr. Ridker was among the ten most often cited researchers in cardiovascular medicine worldwide. Amongst many other honors, he received the American Heart Association Distinguished Scientist Award in 2013, gave the Braunwald Lecture of the American College of Cardiology in 2019, was awarded the Gotto Prize for Atherosclerosis Research from the International Atherosclerosis Society in 2021, and is an elected Member of the National Academy of Medicine (USA).

Bruce McManus, PhD, MD

Dr. McManus is Professor Emeritus, Department of Pathology and Laboratory Medicine, the University of British Columbia. He has served as CEO, Centre of Excellence for Prevention of Organ Failure (PROOF Centre), Director, UBC Centre for Heart Lung Innovation, and Scientific Director, Institute of Circulatory and Respiratory Health, CIHR. Dr. McManus received BA and MD degrees (University of Saskatchewan), an MSc (Pennsylvania State University), and a PhD (University of Toledo). He pursued post-doctoral fellowships at the University of California, Santa Barbara (Environmental Physiology) and at the National Heart, Lung, and Blood Institute, Bethesda, MD (Cardiovascular & Pulmonary Pathology), and residency training at the Peter Bent Brigham Hospital, Harvard University (Internal Medicine and Pathology). Dr. McManus' investigative passion relates to mechanisms, consequences, detection and prevention of injury and aberrant repair in inflammatory diseases of the heart and blood vessels. He has had a longstanding interest in the diagnosis and management of acute viral myocarditis. His life's scholarship is reflected in more than 400 original peer-reviewed publications, over 60 chapters, and several books. He is an extraordinary mentor. Dr. McManus has been widely appreciated for his research, mentoring, and leadership contributions to the health sciences. Amongst many awards and honors, Dr. McManus received the prestigious Max Planck Research Award in 1991, was elected a Fellow of the Royal Society of Canada in 2002, was appointed a Member of the Order of

Canada in 2018, and to the Order of British Columbia the following year.

Joseph A. Hill, MD, PhD

Dr. Hill is Professor of Internal Medicine and Molecular Biology, Chief of Cardiology at UT Southwestern Medical Center, Dallas, TX, and Director of the Harry S. Moss Heart Center. Dr. Hill holds both the James T. Willerson, MD, Distinguished Chair in Cardiovascular Diseases, and the Frank M. Ryburn Jr. Chair in Heart Research. He graduated from Duke University with MD and PhD degrees in 1987. His PhD dissertation research was in the field of cardiac ion channel biophysics. Dr. Hill then worked for five years as a postdoctoral fellow at the Institut Pasteur in Paris studying central and peripheral nicotinic receptors. He next completed an internal medicine internship and residency, as well as a clinical cardiology fellowship, at the Brigham and Women's Hospital, Harvard Medical School. He served on faculty at the University of Iowa for five years before moving in 2002 to the UT Southwestern. Dr. Hill's research examines molecular mechanisms of structural, functional, metabolic, and electrophysiological remodeling in cardiac hypertrophy and heart failure. He has served on many NIH panels and committees and delivered numerous invited lectures in the U.S. and around the world. Dr. Hill has received many recognitions and awards, including election to the Association of American Professors and the 2018 Research Achievement Award from the International Society for Heart Research. For the past six years, Dr. Hill has been the Editor-in-Chief of the prestigious American Heart Association journal *Circulation*.

Outlook

The Corporation expects that the June 30, 2022 working capital of $62,253,956 will be sufficient to fund operations and capital requirements into H2 2024.

During the next 12 - 18 months, the Corporation is positioned to achieve the following corporate milestones. The timelines for reaching these milestones may be adversely impacted by the current COVID-19 pandemic (see "Risk Factors - COVID-19 pandemic" below).

- Complete patient recruitment of 422 subjects in the *LANCER* trial, subject to the manner in which the pandemic evolves as well as vaccine uptake, compliance, and effectiveness;
- Initiate and complete patient enrollment in *ARCHER* trial;
- Initiate and complete patient enrollment in a Phase II open-label pilot study in recurrent pericarditis;
- Advance development of a subcutaneous cannabidiol formulation into an IND enabling program;
- Conduct further discovery research focused on additional anti-inflammatory strategies.

Use of Offering Proceeds

The Corporation may reallocate the net offering 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 offering 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 offering, as disclosed in the Corporation's prospectus dated April 30, 2021, and spending from May 12, 2021 (offering closing date) to June 30, 2022 is as follows:

Use of Proceeds	Amount	Spent	Remaining
Phase II/III Clinical Trials in Acute Myocarditis	6,500,000	2,525,598	3,974,402
Pre-clinical studies	1,500,000	874,332	625,668
Research and Development of Subcutaneous Formulation	4,000,000	123,979	3,876,021

A comparison between the projected use of proceeds for the two-year period subsequent to closing the offering, as disclosed in the Corporation's prospectus dated November 3, 2021, and spending from November 5, 2021 (offering closing date) to June 30, 2022 is as follows (figures in the below "Amount" column are translated to CAD from USD at a rate of 1.29):

Use of Proceeds	Amount	Spent	Remaining
LANCER Study	5,150,080	2,634,245	2,515,835
Phase II Clinical Trials in Acute Myocarditis	4,120,064	-	4,120,064
Subcutaneous Development	3,090,048	-	3,090,048
Development of Additional Orphan Program	4,120,064	68,888	4,051,176
Discovery Research	10,300,160	-	10,300,160

Summary of Quarterly Results

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

Three Months Ended	Total Revenue ($)	Profit or (Loss) Total ($)	Profit or (Loss) Per Share[9] ($)	Total Assets ($)
June 30, 2022[1]	nil	(6,489,488)	(0.10)	74,264,968
March 31, 2022[2]	nil	(8,954,095)	(0.14)	79,432,326
December 31, 2021[3]	nil	(6,257,462)	(0.11)	87,876,128
September 30, 2021[4]	nil	(9,909,991)	(0.23)	31,731,649
June 30, 2021[5]	78,760	(6,560,943)	(0.16)	36,749,684
March 31, 2021[6]	nil	(8,909,848)	(0.26)	21,097,832
December 31, 2020[7]	nil	(9,666,527)	(0.15)	15,893,181
September 30, 2020[8]	nil	(4,401,243)	(0.13)	24,455,341

Note:

1. Net loss of $6,489,488 included general and administration of $4,825,039 and research and development of $4,407,182. These are partially offset by the gain on foreign exchange of $1,689,797, and change in derivative liability of $861,600.

2. Net loss of $8,954,095 included general and administration of $5,940,952 and research and development of $3,847,527. These are partially offset by the gain on the change in derivative liability of $2,132,517 at March 31, 2022.

3. Net loss of $6,257,462 included general and administration of $9,569,839 and research and development of $3,527,834. These are partially offset by the gain on the change in derivative liability of $4,916,304 at December 31, 2021.

4. Net loss of $9,909,991 included general and administration of $7,571,515 and research and development of $2,592,094.

5. Net loss of $6,560,943 included general and administration of $4,430,388 and research and development of $2,071,681.

6. Net loss of $8,909,848 included general and administration of $6,301,398 and research and development of $2,678,812.

7. Net loss of $9,666,527 included research and development of $7,240,954 and general and administration of $2,377,762.

8. Net loss of $4,401,243 included general and administration $2,494,297 and research and development of $1,916,486.

9. Basic and fully diluted.

Discussion of Operations

Six months ended June 30, 2022, compared to the six months ended June 30, 2021

For the six months ended June 30, 2022, the Corporation's net loss was $15,443,582, compared to a net loss of $15,470,791 for the six months ended June 30, 2021. The decrease in net loss of $27,209 is a result of the following:

- General and administration expenses increased to $10,765,990 for the six months ended June 30, 2022, compared to $10,731,786 for the six months ended June 30, 2021. The increase in the Corporation's operations during the six months ended June 30, 2022, was offset by the start-up costs related to the patient in-take in the LANCER trial, as well as the financing on May 12, 2021 that occurred during the six months ended June 30, 2021.

- Research and development increased to $8,254,709 for the six months ended June 30, 2022, compared to $4,750,493 for the six months ended June 30, 2021. During the six months ended June 30, 2022, the Corporation incurred increased research and development costs related to basic science, pre-clinical studies, and clinical studies, specifically relating to the Phase II/III COVID-19 trial and the Phase II acute myocarditis trial.

- The net loss is partially offset by the gain on the change in derivative liability, based on the revaluation as at June 30, 2022 of $2,994,117. There was no derivative liability during the six months ended June 30, 2021.

Three months ended June 30, 2022, compared to the three months ended June 30, 2021

For the three months ended June 30, 2022, the Corporation's net loss was $6,489,488, compared to a net loss of $6,560,943 for the three months ended June 30, 2021. The decrease in net loss of $71,455 is a result of the following:

- General and administration expense increased to $4,825,039 for the three months ended June 30, 2022, compared to $4,430,388 for the three months ended June 30, 2021. During the three months ended June 30, 2022, the Corporation's operations increased due to clinical trials in progress, as well as additional pre-clinical research.

- Research and development increased to $4,407,182 for the three months ended June 30, 2022, compared to $2,071,681 for the three months ended June 30, 2021. During the three months ended June 30, 2022, the Corporation incurred increased research and development costs related to basic science, pre-clinical studies, and clinical studies, specifically relating to the Phase II/III COVID-19 trial and the Phase II acute myocarditis trial.

- The net loss for the three months ended June 30, 2022, is partially offset by the gain on the change in derivative liability, based on the revaluation as at June 30, 2022, of $861,600. There was no derivative liability during the three months ended June 30, 2021.

- The net loss for the three months ended June 30, 2022, is partially offset by the gain on foreign exchange, mainly based on the revaluation of funds held in USD. This resulted in a gain during the three months ended June 30, 2022, of $1,689,797. During the three months ended June 30, 2021, the Corporate incurred a loss on foreign exchange of $163,114.

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 equity, comprising share capital, warrants, and contributed surplus,

less accumulated deficit, which at June 30, 2022 totaled $62,851,693 (December 31, 2021 – $76,238,075).

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 and reviewed with the Board of Directors of the Corporation.

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 June 30, 2022, Cardiol had $70,453,893 in cash and cash equivalents (December 31, 2021 – $83,899,070).

At June 30, 2022, accounts payable and accrued liabilities were $7,649,866 (December 31, 2021 – $4,859,352). The Corporation's cash and cash equivalents balances as at June 30, 2022 and December 31, 2021 are sufficient to pay these liabilities.

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 June 30, 2022, December 31, 2021, 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 2022 Fiscal Period

Cash and cash equivalents used in operating activities were $13,401,340 for the six months ended June 30, 2022. Operating activities were affected by a net loss of $15,443,582 and the net change in non-cash working capital balances of $2,866,689, and by other non-cash adjustments of $(824,447). Non-cash adjustments mainly consisted of $484,157 for share-based compensation, $(2,994,117) for change in derivative liability, and $1,355,775 for research and development expenses to be settled through warrant exercises. Non-cash working capital was mainly the result of an increase in accounts payable and accrued liabilities of $2,790,514.

Cash and cash equivalents used in investing activities were $17,591 for the six months ended June 30, 2022.

Cash and cash equivalents used in financing activities were $26,246 for the six months ended June 30, 2022, as a result of lease liability payments.

Use of Working Capital

As of June 30, 2022, Cardiol's working capital was $62,253,956. Based on current projections, Cardiol believes that this amount is sufficient to meet its planned development activities into H2, 2024 as described in the "Outlook" section above.

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

Contractual Obligations	Total ($)	Up to 1 year ($)	1 – 3 years ($)	4 – 5 years ($)	After 5 years ($)
Amounts payable and other liabilities	7,649,866	7,649,866	Nil	Nil	Nil
Office lease (1)	205,509	107,222	98,287	Nil	Nil
Consulting agreements	211,796	211,796	-	Nil	Nil
Contract research	1,584,059	1,584,059	Nil	Nil	Nil
Total	**9,651,230**	**9,552,943**	**98,287**	**Nil**	**Nil**

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

Related Party Transactions

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

i. Included in research and development expense is $362,053 and $702,532 for the three and six months ended June 30, 2022 (three and six months ended June 30, 2021 - $186,937 and $780,736) paid to a company, Dalton Chemical Laboratories, Inc. operating as Dalton, that is related to a director (Peter Pekos). Mr. Pekos is also the CEO of Dalton. As at June 30, 2022, $928,514 (December 31, 2021 - $671,462) was owed to this company and this amount was included in accounts payable and accrued liabilities and nil (December 31, 2021 - $12,402) was paid to this company and was included in prepaid expenses. 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.

b) 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 June 30, 2022 ($)	Three months ended June 30, 2021 ($)	Six months ended June 30, 2022 ($)	Six months ended June 30, 2021 ($)
Salaries and benefits	507,290	602,769	1,369,618	1,435,888
Share-based payments	366,498	300,293	847,779	453,648
	873,788	**903,062**	**2,217,397**	**1,889,536**

As at June 30, 2022, nil (December 31, 2021 - $46,488) 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;
- The valuation of the derivative liability;
- The estimate of the percentage of completion of certain research and development agreements;
- 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; and
- 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 nine years.

Critical accounting judgments

- Management applied judgment in determining the functional currency of the Corporation as Canadian dollars;
- Management applied judgment in determining the Corporation's ability to continue as a going concern. The Corporation has incurred significant losses since inception. Management determined that a material going concern uncertainty does not exist due to the sufficient working capital to support their planned expenditure levels. Future financing may come from product sales, licensing arrangements, research and commercial development partnerships, government grants, and/or corporate finance arrangements;
- Management's assessment that no impairment exists for intangible assets, based on the facts and circumstances that existed during the period; and
- Management's assessment of the impact the novel coronavirus (COVID-19) pandemic will have on operations (see "Risk Factors - COVID-19 pandemic" below).

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 61,942,499 issued and outstanding common shares, of which 50,000 common shares are subject to vesting of one-half on each of September 29, 2022 and March 29, 2023; 25,000 common shares are subject to vesting of on August 17, 2022; 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, warrants and performance share units as shown below:

Warrants

Expiry date	Exercise price ($)	Warrants outstanding
August 31, 2022	4.00	824,000
May 12, 2024	4.60	3,453,178
November 5, 2024	3.75[(1)]	8,175,000
Total		**12,452,178**

(1) Exercise price denoted in USD.

Stock Options

Expiry date	Exercise price ($)	Options outstanding	Options exercisable
February 8, 2023	4.56	416,666	416,666
February 18, 2023	4.80	410,000	410,000
February 22, 2023	4.46	130,000	130,000
October 15, 2024	3.23	60,000	40,000
December 2, 2024	4.08	60,000	40,000
December 5, 2024	3.69	60,000	60,000
February 23, 2025	3.54	81,800	81,800
August 16, 2025	5.00	200,000	200,000
August 19, 2025	2.12	100,000	33,333
August 30, 2025	5.00	420,000	420,000
October 7, 2025	2.90	35,000	11,667
December 2, 2025	2.59	130,000	43,333
January 2, 2026	4.30	150,000	150,000
January 24, 2026	5.34	60,000	60,000
March 29, 2026	4.51	400,000	133,333
April 1, 2026	5.77	140,000	140,000
May 12, 2026	3.00	75,000	75,000
June 5, 2026	3.26	60,000	30,000
August 16, 2026	3.26	60,000	-
August 24, 2026	3.81	90,000	-
September 13, 2026	4.88	55,000	-
December 8, 2026	2.65	380,000	-
December 8, 2026	3.59	325,000	-
January 11, 2027	2.18	220,000	-
March 14, 2027	2.07	60,000	-
May 12, 2027	1.46	115,000	
Total		**4,293,466**	**2,475,132**

Performance Share Units and Other Share-Awards

The Corporation has no outstanding performance share units ("PSUs") as at June 30, 2022 (June 30, 2021 - nil). During the six months ended June 30, 2022, 1,200,000 PSUs granted to certain consultants of the Corporation expired. The performance criteria were not achieved and therefore no shares were granted in connection with these PSUs.

Subsequent to June 30, 2022, the Corporation granted 1,600,000 PSUs to certain consultants of the Corporation, requiring the completion of certain performance criteria specific to each grant.

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 has 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 accounts receivable, which are classified and measured at amortized cost. The Corporation's financial liabilities consist of accounts payable and accrued liabilities, and lease liability, which are classified and measured at amortized cost, and derivative liabilities which are classified and measured at FVTPL.

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); and
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The Corporation's derivative liabilities are measured at fair value Level 3. No other financial instruments are measured at fair value.

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 2022 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 accounts 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 as well as receivables. 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 $5,090,000 (December 31, 2021 - $5,875,000).

Commitments and Contingency

(i) The Corporation has leased premises from third parties. The minimum committed lease payments as at June 30, 2022, which include the lease liability payments, are as follows:

Fiscal year		
2022		53,611
2023		107,222
2024		44,676
Total	**$**	**205,509**

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

Fiscal year	
2022	211,796

(iii) Pursuant to the terms of agreements with various other contract research organizations, the Corporation is committed for contract research services for 2022 at a cost of approximately $1,584,059.

Breakdown of Expensed Research and Development

	Three months ended June 30, 2022 ($)	Three months ended June 30, 2021 ($)	Six months ended June 30, 2022 ($)	Six months ended June 30, 2021 ($)
Contract research	3,276,166	1,619,640	7,140,403	3,856,760
Wages	322,075	143,741	575,060	460,620
Supplies	15,149	43,126	17,041	48,253
Regulatory	114,374	93,353	259,021	143,432
Share-based compensation	91,347	171,821	263,184	241,428
	4,407,182	**2,071,681**	**8,254,709**	**4,750,493**

Breakdown of Intangible Assets

	As at June 30, 2022 ($)	As at December 31, 2021 ($)
Exclusive global license agreement	767,228	767,228
Accumulated amortization	(430,204)	(387,982)
Carrying value	**337,024**	**379,246**

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 to provide such assurance as at June 30, 2022.

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 "Risk Factors" in the Corporation's MD&A for the financial year ended December 31, 2021 (available on SEDAR at www.sedar.com and EDGAR at www.sec.gov).