

Cardiol Therapeutics Announces Study Results from Collaborating Research Center Demonstrating Cardioprotective Effects of Cannabidiol in a Model of Heart Failure

written by Raj Shah | March 7, 2023

Results Demonstrate Cannabidiol Improved Cardiac Function, Reduced its Inflammatory State, and Prevented the Development of Hypertrophy and Fibrosis in Heart Tissue

Data Presented at The American College of Cardiology's 72nd Annual Scientific Session Together with the World Congress of Cardiology

March 7, 2023 ([Source](#)) – Cardiol Therapeutics Inc. (NASDAQ: CRDL) (TSX: CRDL) (“Cardiol” or the “Company”), a clinical-stage life sciences company focused on the research and clinical development of anti-inflammatory and anti-fibrotic therapies for the treatment of heart diseases, announced study results from one of its international collaborating research centers demonstrating that its pharmaceutically manufactured cannabidiol significantly prevents cardiac dysfunction and the development of fibrosis and cardiomyocyte hypertrophy in a pre-clinical model of heart failure and reduces expression of key inflammatory and fibrotic markers. Cannabidiol is the active pharmaceutical ingredient in CardiolRx™, the Company's lead investigational oral drug candidate currently in Phase II clinical trials for recurrent pericarditis and acute

myocarditis, and in its novel subcutaneously administered drug formulation intended for use in heart failure and currently in pre-clinical development.

The studies were presented by researchers from Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico (“TecSalud”) at the American College of Cardiology’s 72nd Annual Scientific Session together with World Congress of Cardiology (“ACC.23/WCC”). TecSalud is one of the Company’s international collaborating research centers working towards the common goal of developing therapies to advance the treatment of heart diseases.

Dr. Andrew Hamer, Cardiol Therapeutics’ Chief Medical Officer and Head of Research & Development commented, “The beneficial effects of cannabidiol in a pre-clinical model of heart failure are of great interest and importance in support of our ARCHER trial which is investigating recovery of cardiac function in patients with myocarditis. The data provides further evidence of the anti-inflammatory and anti-fibrotic effects of CardiolRx™ and new insights concerning the drug’s impact on mitochondrial function both of which are significant as we continue to elucidate cannabidiol’s mode of action in heart diseases.”

The poster entitled “Cannabidiol Therapy for Chronic Heart Failure Prevents Cardiac Pathological Remodeling in a Non-ischemic Cardiomyopathy Murine Model” was presented on March 4th within the “Heart Failure and Cardiomyopathies: Basic and Translational Science 1” session of ACC.2023/WCC. This work builds upon existing knowledge by confirming cannabidiol’s cardioprotective properties and, in this model, its ability to reduce inflammation and prevent hypertrophy and fibrosis in heart tissue. This work also furthers the understanding of cannabidiol’s ability to improve cardiac function and, in isolated cardiomyocytes, improve calcium handling and

mitochondrial health.

A second poster entitled “Abnormal Mitochondrial Calcium Content in Angiotensin-Induced Hypertrophy is Ameliorated by Cannabidiol Mimicking PPAR- γ Activation” was presented on March 5th within the “Heart Failure and Cardiomyopathies: Basic and Translational Science 8” session of ACC.2023/WCC. This poster presented data related to the role of cannabidiol in mitochondrial calcium dynamics in hypertrophic cells. Cannabidiol was able to prevent hypertrophy-induced mitochondrial calcium overload and prevent hypertrophy-induced increase of several mitochondrial function markers such as reactive oxygen species and calcium uptake. In addition, this work suggests that cannabidiol’s effects may rely on PPAR- γ activation, which in turn can inhibit NF- κ B, a transcription factor that regulates pro-inflammatory and pro-hypertrophic genes. Together, these findings further clarify cannabidiol’s mode of action in combatting cardiac hypertrophy.

About The American College of Cardiology’s 72nd Annual Scientific Session Together with World Congress of Cardiology

The ACC.23/WCC brings together academics, researchers, clinicians, and industry from around the world to explore the latest science and innovation and learn about practice-changing updates towards advancing cardiovascular care. The three-day event provides attendees an opportunity to explore over 200 sessions across 11 learning pathways covering a vast array of cutting-edge topics taught by global experts in their field.

About Cardiol Therapeutics

Cardiol Therapeutics Inc. (NASDAQ: CRDL) (TSX: CRDL) is a clinical-stage life sciences company focused on the research and clinical development of anti-inflammatory and anti-fibrotic therapies for the treatment of heart diseases. The Company’s

lead product candidate, CardiolRx™ (cannabidiol), is a pharmaceutically manufactured oral solution formulation that is being clinically developed for use in heart diseases. It is recognized that cannabidiol inhibits activation of the inflammasome pathway, an intracellular process known to play an important role in the inflammation and fibrosis associated with myocarditis, pericarditis, and heart failure.

Cardiol has received Investigational New Drug Application authorization from the United States Food and Drug Administration to conduct clinical studies to evaluate the efficacy and safety of CardiolRx™ in two diseases affecting the heart: (i) a Phase II multi-national, randomized, double-blind, placebo-controlled trial (the “ARCHER” trial) in acute myocarditis, an important cause of acute and fulminant heart failure in young adults and a leading cause of sudden cardiac death in people less than 35 years of age; and (ii) a Phase II multi-center open-label pilot study in recurrent pericarditis (inflammation of the pericardium), which is associated with symptoms including debilitating chest pain, shortness of breath, and fatigue, and results in physical limitations, reduced quality of life, emergency department visits, and hospitalizations.

Cardiol is also developing a novel subcutaneously administered drug formulation of cannabidiol intended for use in heart failure – a leading cause of death and hospitalization in the developed world, with associated healthcare costs in the United States exceeding \$30 billion annually.

For more information about Cardiol Therapeutics, please visit cardiolrx.com.

Cautionary statement regarding forward-looking information:

This news release contains “forward-looking information” within

the meaning of applicable securities laws. All statements, other than statements of historical fact, that address activities, events, or developments that Cardiol believes, expects, or anticipates will, may, could, or might occur in the future are "forward-looking information". Forward looking information contained herein may include, but is not limited to, statements relating to the Company's focus on developing anti-inflammatory and anti-fibrotic therapies for the treatment of heart diseases, the molecular targets and mechanism of action of our product candidates, the Company's intended clinical study and trial activities and timelines associated with such activities, the fact that TecSalud and the Company are working towards the common goal of developing therapies to advance the treatment of heart diseases, cannabidiol's cardioprotective properties and its ability to reduce inflammation and prevent hypertrophy and fibrosis in heart tissue, cannabidiol's ability to improve cardiac function and, in isolated cardiomyocytes, improve calcium handling and mitochondrial health, PPAR- γ activation can inhibit NF- κ B, a transcription factor that regulates pro-inflammatory and pro-hypertrophic genes and, the Company's plan to advance the development of a novel subcutaneous formulation of CardiolRx™ for use in heart failure. Forward-looking information contained herein reflects the current expectations or beliefs of Cardiol based on information currently available to it and is based on certain assumptions and is also subject to a variety of known and unknown risks and uncertainties and other factors that could cause the actual events or results to differ materially from any future results, performance or achievements expressed or implied by the forward-looking information, and are not (and should not be considered to be) guarantees of future performance. These risks and uncertainties and other factors include the risks and uncertainties referred to in the Company's Annual Information Form dated March 23, 2022, as well as the risks and uncertainties associated with product

commercialization and clinical studies. These assumptions, risks, uncertainties, and other factors should be considered carefully, and investors should not place undue reliance on the forward-looking information, and such information may not be appropriate for other purposes. Any forward-looking information speaks only as of the date of this press release and, except as may be required by applicable securities laws, Cardiol disclaims any intent or obligation to update or revise such forward-looking information, whether as a result of new information, future events, or results, or otherwise.

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