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Cardiol Therapeutics Announces Topline Results from Phase I Single and Multiple Ascending Dose Clinical Trial of CardiolRx™

Results expected to support the Company's plans to file an IND application with the FDA for a Phase II international trial in acute myocarditis

Oakville, ON – April 12, 2021 – Cardiol Therapeutics Inc. (**TSX: CRDL**) (**OTCQX: CRTPF**) (**FSE: CT9**) (**"Cardiol"** or the **"Company"**), a clinical-stage biotechnology company focused on developing innovative anti-inflammatory therapies for the treatment of cardiovascular disease (CVD), today announced topline results from a Phase I single and multiple ascending dose clinical trial of CardiolRx™, a pharmaceutically produced oral cannabidiol formulation being developed for the treatment of acute and chronic inflammation associated with heart disease.

"As our study represents one of the most comprehensive Phase I clinical trials ever conducted in adults with a pharmaceutically produced cannabidiol formulation, we are pleased that the data are consistent with our expectations concerning the drug's safety, tolerability, and PK profile," said David Elsley, President and CEO of Cardiol Therapeutics. "Study results support the dosing regimen being utilized in our U.S. Phase II/III clinical trial investigating the cardioprotective properties of CardiolRx in 422 hospitalized patients with COVID-19 with a prior history of, or risk factors for, cardiovascular disease, and our plans to file a IND application with the FDA for a Phase II international trial in acute myocarditis, an inflammatory condition of the heart, which remains a leading cause of sudden cardiac death in children and young adults."

The Phase I trial was a randomized, placebo-controlled, double-blind study designed to evaluate the safety, tolerability, and pharmacokinetic (PK) profile of CardiolRx at various dose levels. The study randomized 52 subjects (age range 25 to 60 years) to one of two groups. In Group A, there were three sub-groups, each involving 12 subjects (nine active and three placebo), with each subject receiving a single dose of 5 mg/kg or 15 mg/kg of CardiolRx, in either the fed or fasted state. In Group B, there were two sub-groups, each involving eight subjects (six active and two placebo) with each subject receiving 5 mg/kg or 15 mg/kg twice daily for six days. Serial blood samples were taken to measure the level of cannabidiol and its two main metabolites.

Topline results demonstrated that CardiolRx was safe and generally well tolerated at all dose levels, with no serious adverse events reported in the study. Fifty-one of the 52 enrolled subjects completed all requirements of the protocol. Each subject had repeated standard measures of safety including physical examination (with vital signs), electrocardiogram (ECG) to monitor cardiac time intervals (particularly, the QTc interval, which is an important measure of the risk for abnormal heart rhythms), as well as a number of biochemical and coagulation

laboratory tests. Despite the relatively high doses of CardiolRx administered during the study, there were no ECG or abnormal laboratory findings after six days of dosing; specifically, no elevation of liver enzymes or QTc changes were detected. The recorded adverse events were all mild or moderate in severity and were primarily related to the gastro-intestinal tract.

PK studies determined that blood levels of the drug generally increased with increasing dose. Following a single dose of CardiolRx, the area under the time-concentration curve (AUC), which represents the extent of exposure to the drug, was 6-7-fold higher in the fed state than the fasted state. Furthermore, following single doses of CardiolRx in the fed state, the time to maximal blood level (Tmax) was in the range of five to seven hours, with a half-life of 26 to 29 hours. The above findings are consistent with published results for oral cannabidiol formulations and serve as a rationale for the dosing regimen that will be utilized in the Company's Phase II/III study being initiated in the U.S. in COVID-19 patients who are hospitalized with a prior history of, or risk factors for CVD, and for the planned Phase II program in acute myocarditis.

About Cardiol Therapeutics

Cardiol Therapeutics Inc. (TSX: CRDL) (OTCQX: CRTPF) (FSE: CT9) is a clinical-stage biotechnology company focused on the research and clinical development of innovative anti-inflammatory therapies for the treatment of cardiovascular disease ("CVD"). The Company's lead product, CardiolRx™, is a pharmaceutically produced oral cannabidiol formulation that is currently entering a Phase II/III outcomes study in hospitalized patients testing positive for the COVID-19 virus. This potentially registrational trial is designed to evaluate the efficacy and safety of CardiolRx as a cardioprotective therapy to reduce mortality and major cardiovascular events in COVID-19 patients who have a prior history of, or risk factors for, CVD, and to investigate the influence CardiolRx has on key markers of inflammatory heart disease.

Cardiol is also planning to file an investigational new drug ("IND") application for a Phase II international trial that will investigate the anti-inflammatory and anti-fibrotic properties of CardiolRx in patients with acute myocarditis, which remains the most common cause of sudden cardiac death in people under 35 years of age. In addition, Cardiol is developing a subcutaneous formulation of CardiolRx and other anti-inflammatory therapies for the treatment of chronic heart failure – a leading cause of death and hospitalization in North America, with associated annual healthcare costs in the U.S. alone exceeding $30 billion.

Cardiol recently commercialized Cortalex™ (cortalex.com), a pharmaceutically produced cannabidiol formulation developed to address underserved segments of the Canadian medicinal cannabidiol market.

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 Canadian securities laws. All statements, other than statements of historical fact, that address activities, events, or developments that Cardiol Therapeutics Inc. ("Cardiol" or the "Company") believes, expects, or anticipates will, may, could or might occur in the future are "forward-looking information." Forward-looking information contained herein may include, statements relating to the Company's plans for clinical trials and its development of innovative anti-inflammatory therapies for the treatment of cardiovascular disease. Forward-looking information contained herein reflects the current expectations or beliefs of Cardiol based on information

currently available to it and is 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 31, 2021, including the risks and uncertainties associated with product commercialization and clinical studies. These risks, uncertainties and other factors should be considered carefully, and investors should not place undue reliance on the forward-looking information. Any forward-looking information speaks only as of the date on which it is made 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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