

Cardiol Therapeutics Demonstrates Novel Way to Target Drugs for Treating Heart Failure Using Nanotechnology

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Cardiol Therapeutics Inc. (“Cardiol” or the “Company”), a nanotherapeutics company focused on the research and commercial development of proprietary drug formulations for the treatment of heart failure, is pleased to announce that experimental research performed at the Houston Methodist DeBakey Heart & Vascular Center, Texas, shows new functionality of the Company’s patented nanotherapeutics. Designed to act as a vehicle to target anti-inflammatory drugs to inflamed heart tissue, these new data demonstrate the accumulation of nanoparticles at regions of fibrosis in diseased hearts, showing potential for Cardiol’s proprietary nanotechnology to be used to target anti-fibrotic drugs directly to areas of fibrosis to treat heart failure.

Researchers at the Houston Methodist DeBakey Heart & Vascular Center administered fluorescently-labelled Cardiol nanoparticles to an experimental model of heart failure. Bright fluorescence was observed in heart failure cardiac tissue, whereas no significant fluorescence was seen in control hearts, showing preferential accumulation of nanoparticles in failing hearts. Importantly, the highest concentrations of fluorescent nanoparticles were seen localized within non-contractile cells in areas of fibrous tissue within the heart – these primarily spindle-shaped cells associated with areas of fibrosis are considered to be fibroblasts (the cells responsible for fibrosis).

“These research results provide new insight into how our nanotherapeutics can be developed to target fibrous tissue in the heart and are the subject of our comprehensive provisional patent application recently filed in the United States,” said David Elsley, President and CEO of Cardiol Therapeutics. “The specific targeting of our nanoparticles to cardiac fibrous tissue offers the potential to utilize drugs more safely and effectively and suggests the possibility of preventing the progression of cardiac fibrosis.”

Inflammation is one of the earliest precursors to fibrosis, a pathology associated with heart disease. Associated with the infiltration of activated inflammatory immune cells into the heart, inflammation leads to the inappropriate activation of fibrocytes into myofibroblasts – the cell type responsible for the deposition of inflexible fibrous material that causes fibrosis. Fibrotic cardiac tissue does not contract and is stiffer than normal, leading to the loss of chamber distensibility that is a common feature of heart failure. These research data show the promise of a new way to target anti-inflammatory and anti-fibrotic drugs directly to the regions of the heart where they will be most effective.

“Fibrosis is a key player in the progression of heart failure with preserved ejection fraction (HFpEF), a chronic condition for which there have been no meaningful advances in treatment in over 20 years,” said Dr. Guillermo Torre-Amione, President of TecSalud, Mexico, former Chief of the Heart Failure Division and Medical Director of Cardiac Transplantation at the Houston Methodist DeBakey Heart & Vascular Center, and a member of Cardiol’s Scientific Advisory Board. “These findings represent a new way to address this vastly underserved segment of the heart failure market by delivering effective therapy to inflamed tissue in the heart.”

About Cardiol Therapeutics

Cardiol Therapeutics is a nanotherapeutics company focused on the research and commercial development of proprietary drug formulations for the treatment of heart failure. Heart failure is a chronic condition that affects more than 26 million people globally. Over five million adults in the U.S. suffer from heart failure, and it remains a leading cause of death and hospitalization with associated healthcare costs exceeding \$30 billion annually. People with heart failure experience shortness of breath, fatigue, rapid heart rate, edema, reduced exercise capacity and a marked reduction in quality of life. Approximately half of all heart failure patients have heart failure with preserved ejection fraction (HFpEF), which is often associated with diabetes, obesity, and high blood pressure and for which there have been no new therapies developed in over 20 years. Cardiol is developing proprietary nanoformulations of

pharmaceutical cannabidiol (CTX01) and methotrexate (CTX02) to target these drugs to the failing heart. Cardiol's CTX01 is designed to target cannabidiol to areas of inflammation in the hearts of patients with HFpEF. Cannabidiol has been shown to attenuate cardiac dysfunction in experimental diabetic cardiomyopathy and to decrease oxidative stress, fibrosis, and inflammation in additional models relevant to HFpEF. CTX02 is being developed to target methotrexate to areas of cardiac fibrosis in heart failure. Experimental data have shown that Cardiol's proprietary nanoparticles accumulate within fibrotic areas of the failing heart and that methotrexate has potent anti-fibrotic properties. For further information, please visit www.cardiolrx.com.

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This news release contains "forward-looking information" within the meaning of applicable Canadian securities laws which may include but is not limited to statements with respect to the intended business strategy of Cardiol Therapeutics Inc. ("Cardiol"), the potential for Cardiol's licensed nanoscale drug encapsulation and delivery technologies to enhance the bioavailability of cannabinoids and other drugs. 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 is frequently characterized by words such as "plan", "expect", "project", "intend", "believe", "anticipate", "forecast", and other similar words or statements that certain events or conditions "may" or "will" occur. Forward-looking information reflects the current expectation or beliefs of Cardiol based on information currently available to Cardiol and is subject to a variety of risks and uncertainties and other factors that could cause the actual events or results to differ materially from those discussed in the forward-looking information. These risks, uncertainties and other factors include the inherent risks involved in government approval or no approval in the foreseeable future; the possibility of project cost overruns or unanticipated costs and expenses; unforeseeable deficiencies in the development of the technology; uncertainties relating to the availability and costs of financing needed in the future; Cardiol's ability to manage growth in its business; competition; failure of clinical trials to demonstrate acceptable levels of safety and efficacy; Cardiol's ability to retain key management and other personnel; and other risks, uncertainties and factors. 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 any forward-looking information, whether as a result of new information, future events or results or otherwise.