

Cardiol Therapeutics' Pharmaceutical Partner Noramco Presents at U.S. FDA Public Hearing on CBD

Addresses Need for Improved Standards and Regulations

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Cardiol Therapeutics Inc. (**TSX: CRDL**; **OTCQX: CRTPF**) ("**Cardiol**" or the "**Company**"), a leader in the research and commercial development of pharmaceutical cannabidiol (CBD) and targeted therapies for inflammatory diseases, announces that Noramco, Inc. (Noramco) of Wilmington, Delaware, Cardiol's pharmaceutical partner and manufacturer of its pure pharmaceutical CBD, was selected to present at the Food and Drug Administration's (FDA) Scientific Data and Information about Products Containing Cannabis or Cannabis-Derived Compounds, Part 15 Public Hearing, that took place on Friday, May 31, 2019, in Silver Spring, Maryland.

The goal of the hearing was to obtain additional scientific data and other information related to cannabis and cannabis-derived compounds to inform the FDA about these products. The FDA invited important stakeholders, including patients, researchers, manufacturers, retailers, and public health and government bodies, all of whom contributed data and experience.

Noramco has more than 40 years' experience and expertise in the manufacture and supply of controlled drug substance active pharmaceutical ingredients (APIs), including cannabinoids. Their APIs are sold in over 30 countries and they have 24 active US Drug Master Files (DMF), including a DMF for pharmaceutical CBD. Noramco is fully cGMP-compliant (FDA inspected and regulated) and has demonstrated a total capacity of >750,000 kg annually in state-of-the-art facilities.

Key messages and recommendations presented at the Hearing by Bill Grubb, Chief Innovation Officer and Executive VP of Business Development of Noramco, included the following:

There is a Need for Federal Oversight of Manufacturing and Testing of CBD Products

- Noramco's own analysis using certified analytical reference standards and scientifically-sound analytical methods confirmed impurities of up to 4.39% in several available botanical CBD products – over 1,000 times higher than Noramco's pure pharmaceutical CBD.
- Numerous other examples of mislabeled and impure CBD products in the marketplace have been cited, including a Journal of the American Medical Association (JAMA) study finding 69% of 84 cannabidiol botanical extract products were mislabeled, triggering the FDA to send warning letters to 14 businesses. The average amount of THC in the products was greater than 4000 parts per million (PPM), enough to produce intoxication or impairment.

cGMP Production is Essential to Provide Safe CBD

- Noramco follows formal FDA-administered cGMP procedures to ensure the highest level of quality, purity, consistency, and stability of its pure pharmaceutical CBD.
- Noramco has established multi-ton cGMP production capability for pure pharmaceutical CBD in excess of 180,000 Kg per annum.
- Noramco utilizes organic chemical synthesis to produce CBD. This process eliminates the risk of contamination by pesticide residues or heavy metals from soil and therefore there are no environmental influences on quality.

Tight Control Limits for Impurities and Assess Stability of Active Ingredients in all CBD Products

- The FDA should adopt International Council for Harmonisation (ICH) guidelines for producers of CBD, from any source, for control of impurities, setting specifications, and for monitoring product stability.
- Product stability and label accuracy over time can only be assured if CBD is produced and monitored according to longestablished regulations, and all commercially available CBD products should have expiry dates.

Limit THC Impurity Levels to ≤1000 PPM in CBD medicines

CBD producers should control THC to ≤ 1000 PPM. Noramco's pharmaceutical CBD has THC levels orders of magnitude
lower, measuring less than <10 PPM; meeting Health Canada's strict standards for products that do not require a warning label
concerning THC content.

"Noramco's commitment to making the purest, safest, and most consistent CBD in the world, at multi-ton scale, underscores Cardiol's rationale for selecting their world-class pharmaceutical production capabilities for our proprietary CardiolRx pure pharmaceutical CBD formulations," said David Elsley, President & CEO of Cardiol Therapeutics. "In collaboration with Noramco and Dalton Pharma, our exclusive global drug formulation partner, Cardiol is now positioned to commercialize pure pharmaceutical CBD products designed to set the highest industry standards for product purity, safety, and consistency for consumers, patients and healthcare providers around the world."

"Noramco is pleased to be partnering with Cardiol Therapeutics to provide consumers access to the purest and safest CBD.

Noramco's pharmaceutical CBD is produced in accordance with cGMP and is tested to assure identity, purity, quality, and strength.

Noramco has clearly demonstrated that multi-ton cGMP-compliant production of CBD is now viable," stated Mr. Grubb of Noramco.

About Noramco, Inc.

Founded in 1979 and headquartered in Delaware, USA, Noramco maintains operations around the world, including Schaffhausen, Switzerland, and is a global leader in the manufacture and supply of controlled drug substance Active Pharmaceutical Ingredients (APIs), including select cannabinoids. With the acquisition of Tasmanian Alkaloids, the addition of the Athens, Georgia site in 1982, and continuous expansions over the past three decades at both US facilities, Noramco now contributes to billion-dollar affiliate franchises, as well as to significant third-party generic and branded pharmaceutical products worldwide.

About Cardiol Therapeutics

Cardiol Therapeutics Inc. is a leader in the research and commercial development of pharmaceutical CBD products and targeted therapies for inflammatory disease. The Company is leveraging its expertise in pharmaceutical CBD to develop pure CBD products for commercialization in the global multi-billion-dollar market for medicinal cannabinoids. The Company is also developing nanoformulations of CBD and other anti-inflammatory drugs for the treatment of heart failure. Heart failure is a leading cause of death and hospitalization, with associated healthcare costs exceeding \$30 billion annually in the U.S. alone. For further information about Cardiol, please visit the Company's website at www.cardiolrx.com.

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Cautionary statement regarding forward-looking information:

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: future events; the future performance or the intended business strategy of Cardiol Therapeutics Inc. ("Cardiol"); the potential for Cardiol's licensed drug encapsulation and delivery technologies to enhance the bioavailability of pharmaceuticals; management's expectations regarding estimated future pharmaceutical research and development opportunities, collaborations and prospects; the success and proposed timing of Cardiol's product development activities, including, but not limited to, the proposed timeline of Cardiol's product candidate pipeline for commercial introduction; the ability of Cardiol to develop its product candidates; Cardiol's plans to research, discover, evaluate and develop additional products; Cardiol's proposed future collaborations to advance Cardiol's lead nanoformulations into clinical development; and the potential for Cardiol's cannabinoid-based products to provide sources of future revenue. 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 "forwardlooking information". Forward-looking information is frequently identified by the use of words such as "plans", "expects", "projects", "intends", "believes", "anticipates", "forecasts", and other similar words and phrases, including variations (and negative variations) of such words and phrases, or may be identified by statements to the effect that certain actions, events or conditions "may", "could", "should", "would", or "will" be taken, occur or be achieved. 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. These risks and uncertainties and other factors include that the success of Cardiol's product candidates will require significant capital resources and years of clinical development efforts; the results of clinical testing and trial activities of Cardiol's products; Cardiol's ability to obtain regulatory approval and market acceptance of its products; Cardiol's ability to raise capital and the availability of future financing; Cardiol's lack of operating history; unforeseeable deficiencies in the development of Cardiol's product candidates; uncertainties relating to the availability and costs of financing needed in the future for Cardiol's research and development initiatives; Cardiol's ability to manage its research, development, growth and operating expenses; the potential failure of clinical trials to demonstrate acceptable levels of safety and efficacy of Cardiol's product candidates; Cardiol's ability to retain key management and other personnel: risks related to fluctuations in medicinal cannabinoid markets in Canada and worldwide; uncertainties regarding Cardiol's ongoing collaborative and manufacturing partnerships; uncertainties regarding results of researching and developing products for human use; Cardiol competes in a highly competitive and evolving industry; Cardiol's ability to obtain and maintain current and future intellectual property protection; and other risks and 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 or revise such forward-looking information, whether as a result of new information, future events or results or otherwise. Although Cardiol believes that the expectations reflected in these forward-looking statements are reasonable, they do involve certain assumptions, risks, and uncertainties and are not (and should not be considered to be) guarantees of future performance. It is important that each person reviewing this news release understands the significant risks attendant to the operations of Cardiol.