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Rapid Progress in Hypertension Studies by Lexaria

- ***Five studies underway to examine DehydraTECH™ CBD for Hypertension.***

KELOWNA, BC / ACCESSWIRE / March 15, 2021/ Lexaria Bioscience Corp. (NASDAQ:LEXX)(NASDAQ:LEXXW)(CSE:LXX) (the "Company" or "Lexaria"), a global innovator in drug delivery platforms, announces extensive progress in five studies focused on the performance of DehydraTECH™ CBD as a treatment for hypertension. Three human clinical trials and two animal research trials are part of the Company's 2021 applied research and development (R&D) program. The Company has additional studies under design, to be announced when available. Lexaria's DehydraTECH CBD for hypertension studies are being performed by third-party laboratories to ensure study objectivity.

DehydraTECH CBD For Hypertension.

All five of the planned 2021 hypertension studies are underway:

HYPER-A21-1: Dosing is complete and sample analysis is underway in this animal study. No observed behavioural tolerability issues were noted during or after dosing. This study is evaluating the rate of absorption and speed with which various new enhanced DehydraTECH experimental formulations - "DehydraTECH 2.0" - deliver CBD to the bloodstream and brain. Enhanced DehydraTECH 2.0 formulations represent next-generation drug delivery enhancements not yet commercially available anywhere in the world. Results should be reported in or around the first half of May.

HYPER-A21-2: Dosing is scheduled to begin next week and is expected to be completed in this animal study by March 30. This study is also evaluating the rate of absorption and speed with which additional enhanced DehydraTECH 2.0 formulations deliver CBD to the bloodstream and brain. Results should be reported in or around the first half of June.

Studies HYPER-A21-1 and HYPER-A21-2 may contribute to superior performance in future generations of commercial products, and also to formulation enhancement in human studies contemplated for late 2021 and 2022. Additional work pursuant to these studies is also expected that will evaluate impacts upon real-time blood pressure in animals at the doses studied.

HYPER-H21-1: Regulatory importation clearance was received for the clinical test articles for this human study which have arrived at the European research site. Following this, recruitment of the 24 volunteers with otherwise untreated pre- or mild-hypertension has begun. Human dosing - using a single 300mg dose of CBD with or without DehydraTECH

formulation enhancement - is tentatively expected to be complete by May. A particular DehydraTECH 2.0 formulation will be evaluated in this study. Time series blood pressure and heart rate analyses are the primary objectives of this study. Secondary objectives include speed and rate of absorption of the CBD and its main metabolites (pharmacokinetics or "PK" assessments), as well as evaluation of inflammatory markers associated with cardiovascular disease and gold-standard biomarkers of nitric oxide. This latter measure provides mechanistic insight into the anticipated reduction in blood pressure via vasodilation. Inflammatory marker assessments may also be applicable to Lexaria's research initiatives in the antiviral therapeutics space whereby effective anti-inflammatory therapies are also useful in treating diseases like COVID-19 or other common pro-inflammatory conditions. Since a large array of data points will be generated and analyzed, final reporting on this study is likely to be reported in early September or thereabouts, though preliminary outcomes may be reported before then.

HYPER-H21-2: Formal hospital and ethics board applications for this upcoming European human clinical study have been approved and test articles are expected to arrive at the research site as early as next week. Following this, recruitment of 16 volunteers will commence soon in this study. A particular DehydraTECH 2.0 formulation will again be utilized in this study. As in HYPER-H21-1, volunteers will be pre- or mildly-hypertensive males and females aged 45-70 years. In this study, however, volunteers will consume three separate doses of 150mg of DehydraTECH CBD or placebo that will be split over a 24-hr period, and be monitored continuously via ambulatory (portable) monitoring technology throughout this time. The primary objectives of this study are blood pressure and heart rate evaluation, while the secondary objectives include central arterial stiffness, physical activity and sleep quality (e.g., total sleep time, total wake time, and sleep efficiency). Once again, a large array of data points will be generated and analyzed and final reporting on this study is likely to be reported in late September or thereabouts, though preliminary outcomes may be reported before then.

HYPER-H21-3: Formal hospital and ethics board approvals for this upcoming European human clinical study have also been received and test articles are also expected to arrive at the research site as early as next week. Following this, 16 volunteers will be recruited once recruitment in studies HYPER-H21-1 and HYPER-H21-2 is complete. In a placebo-controlled and blinded design, a single 300mg dose of a particular DehydraTECH 2.0 CBD formulation will be administered in this "Stress Test" study to examine its effect on acute pulmonary hypertension. Exposure to acute reductions in oxygen tension (i.e., hypoxia) causes rapid hypoxic pulmonary vasoconstriction (HPV) and, as a consequence of this HPV response, pulmonary arterial pressure increases. If this increase in pressure becomes too high, as is the case in many cardiac pathologies, an excess of fluid in the lungs can occur that causes difficulty with breathing. The extent to which CBD may act as a novel treatment for HPV, and potentially as an alternative treatment for pulmonary hypertension, is unknown. Thus, the primary objective of this study is to evaluate the effect of DehydraTECH CBD on pulmonary vascular function in normotensive individuals exposed to hypoxia. The magnitude of HPV, blood pressure, heart rate, blood samples (as per HYPER-H21-1 , see above), and pulmonary gas exchange data will be collected and analyzed. Details will be furnished at a future date on the likely timing of reporting from this study once recruitment has begun.

The five studies in Lexaria's 2021 DehydraTECH CBD hypertension program are expected to generate data required to further support the validity of using DehydraTECH CBD as a

potential anti-hypertension treatment across various prospective applications to the US$28 billion annual hypertension drug market. In addition, direct healthcare costs for patients with pulmonary arterial hypertension has been estimated at between US$29,712 and $142,500 per year. Lexaria holds 18 granted patents internationally, including issuances in the European Union and Australia specifically to use DehydraTECH-processed CBD to treat heart disease.

Summary

Lexaria relies on applied R&D programs to generate confirmatory results and data evidencing improved drug delivery characteristics that enable pursuit of commercial opportunities and/or corporate relationships. As such, Lexaria considers advancing these applied R&D studies to be a vital early step toward its goal of establishing commercial relationships with potential industry partners to utilize DehydraTECH within their existing product lines or in the development of new product lines.

All studies referenced within this press release are fully funded from existing Company resources.

About Lexaria Bioscience Corp.

Lexaria Bioscience Corp.'s proprietary drug delivery technology, DehydraTECH™, improves the way active pharmaceutical ingredients (APIs) enter the bloodstream by promoting healthier oral ingestion methods and increasing the effectiveness of fat-soluble active molecules, thereby lowering overall dosing. The Company's technology can be applied to many different ingestible product formats, including foods, beverages, oral suspensions, tablets, and capsules. DehydraTECH has repeatedly demonstrated since 2016 with cannabinoids and nicotine the ability to increase bio-absorption by up to 5-10x, reduce time of onset from 1 - 2 hours to minutes, and mask unwanted tastes; and is planned to be further evaluated for orally administered bioactive molecules, including anti-virals, cannabinoids, vitamins, non-steroidal anti-inflammatory drugs (NSAIDs), and nicotine. Lexaria has licensed DehydraTECH to multiple companies including a world-leading tobacco producer for the development of smokeless, oral-based nicotine products and for use in industries that produce cannabinoid beverages, edibles, and oral products. Lexaria operates a licensed in-house research laboratory and holds a robust intellectual property portfolio with 18 patents granted and approximately 60 patents pending worldwide. For more information, please visit www.lexariabioscience.com.

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

This press release includes forward-looking statements. Statements as such term is defined under applicable securities laws. These statements may be identified by words such as "anticipate," "if," "believe," "plan," "estimate," "expect," "intend," "may," "could," "should," "will," and other similar expressions. Such forward-looking statements in this press release include, but are not limited to, statements by the company relating the Company's ability to carry out research initiatives, receive regulatory approvals or grants or experience positive effects or results from any research or study. Such forward-looking statements are estimates reflecting the Company's best judgment based upon current information and involve a number of risks and uncertainties, and there can be no assurance that the Company will actually achieve the plans, intentions, or expectations disclosed in these forward-looking

statements. As such, you should not place undue reliance on these forward-looking statements. Factors which could cause actual results to differ materially from those estimated by the Company include, but are not limited to, government regulation and regulatory approvals, managing and maintaining growth, the effect of adverse publicity, litigation, competition, scientific discovery, the patent application and approval process, potential adverse effects arising from the testing or use of products utilizing the DehydraTECH technology, the Company's ability to maintain existing collaborations and realize the benefits thereof, delays or cancellations of planned R&D that could occur related to pandemics or for other reasons, and other factors which may be identified from time to time in the Company's public announcements and periodic filings with the US Securities and Exchange Commission on EDGAR. There is no assurance that any of Lexaria's postulated uses, benefits, or advantages for the patented and patent-pending technology will in fact be realized in any manner or in any part. No statement herein has been evaluated by the Food and Drug Administration (FDA). Lexaria-associated products are not intended to diagnose, treat, cure or prevent any disease. Any forward-looking statements contained in this release speak only as of the date hereof, and the Company expressly disclaims any obligation to update any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise, except as otherwise required by law.

The CSE has not reviewed and does not accept responsibility for the adequacy or accuracy of this release.

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