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Lexaria to Evaluate DehydraTECH(TM) in Multiple New Markets

- ***Undertaking new 2021 R&D programs in additional drug markets with combined market potential of $87 Billion.***

KELOWNA, BC / ACCESSWIRE / April 6, 2021 / Lexaria Bioscience Corp. (NASDAQ:LEXX)(NASDAQ:LEXXW)(CSE:LXX) (the "Company" or "Lexaria"), a global innovator in drug delivery platforms, will begin important new applied research and development (R&D) study programs planned in 2021.

Lexaria's new study programs will target four drug markets, including NSAIDs, nicotine replacement therapies, tetrahydrocannabinol, and erectile dysfunction. Each of the studies will evaluate the rate of absorption and speed (pharmacokinetics or "PK" assessments) with which various new enhanced DehydraTECH^{TM} experimental formulations - "DehydraTECH 2.0" - deliver the drugs being studied into the bloodstream and, in some cases, the brain, after oral dosing. Evidencing improvements in delivery efficiencies or reductions in time required to deliver drugs into bloodstream and brain is intended to support further study and commercial exploitation through prospective pharmaceutical industry strategic partnering.

"Our 2021 study program - already the largest in our company's history - is growing," commented Chris Bunka, CEO of Lexaria. "All of our studies are designed to generate must-have data allowing us to have more meaningful business discussions with various industry leaders and, as such, can shorten the time required for positive commercial developments."

Ibuprofen (such as Advil) and Naproxen (such as Aleve): NSAID-A21-1.

Test articles are planned to be manufactured in April, and animal dosing is expected in July. The global NSAID market was US$15.6 Billion in 2019,and is expected to grow to $24.4 Billion in 2027. Although NSAIDs are in widespread use, they can causeserious side effects such as gastrointestinal toxicity, irreversible kidney damage, and 16,500 deaths per year. Lexaria will investigate whether DehydraTECH-processed NSAIDs might achieve higher bioavailability and brain uptake than conventional formulations and, in turn, be able to be used at lower dosage levels in order to lower unwanted side effects. Lexaria has selected ibuprofen and naproxen for this exercise as two of the most common NSAIDs in use today, predominantly for management of chronic inflammation and pain, respectively. DehydraTECH for oral NSAID delivery is covered by existing granted Lexaria patents in the USA and internationally as well as additional patent applications pending globally.

THC: THC-A21-1.

Test articles are planned to be manufactured in July, and animal dosing is expected in August/September. Lexaria has a successful track record through strategic partners and licensees who use DehydraTECH technology and have demonstrated improved delivery and performance of tetrahydrocannabinol ("THC") in both subjective human studies and marketed consumer packaged goods product offerings. Furthermore, Lexaria has repeatedly demonstrated that DehydraTECH-processed cannabidiol (CBD) (another common cannabinoid) has superior delivery characteristics into the bloodstream and brain compared to generic CBD and expects to generate similar results with THC. Successful results from this study will support efforts to commercialize DehydraTECH within the registered THC industry. The global licensed dispensary market for cannabis is projected to be $40.6 Billion in 2024. DehydraTECH for oral THC delivery is covered by existing granted Lexaria patents in the USA and internationally as well as additional patent applications pending globally. Lexaria divested certain of its THC-related business assets as it prepared for its uplisting to the Nasdaq marketplace, however, it retained all rights to use its DehydraTECH technology with THC related to pharmaceutical purposes or registered drugs within its wholly-owned subsidiary Lexaria Pharmaceutical Corp.

Oral Nicotine: NIC-C21-1

Test articles have been manufactured, and dosing is expected in September/October. The global market for smokeless tobacco and nicotine replacement therapy (NRT) pharmaceutical products was $15.5 Billion in 2018. Lexaria has repeatedly demonstrated that DehydraTECH-processed nicotine has superior delivery characteristics compared to generic nicotine when dosed orally and swallowed for intestinal delivery to the bloodstream. Lexaria's limited subjective human testing utilizing DehydraTECH-processed nicotine formulations have demonstrated nicotine absorption and onset of nicotine effectiveness in as little as 1.5-4 minutes after an oral dose compared to average 8-10 minutes with comparable pouches. The upcoming PK test will measure the delivery of nicotine directly into oral mucosal tissues to evaluate potential superior delivery characteristics without the need to swallow. Both cigarette and e-cigarette sales are trending lower due to well-publicized issues regarding health; whereas oral nicotine products were the first ever to receive an FDA reduced risk notice. Modern oral nicotine products contain no tobacco, unlike older consumer products which contain moist tobacco. DehydraTECH for oral nicotine is covered by existing granted Lexaria patents in the USA and internationally as well as additional patent applications pending globally.

Sildenafil (such as Viagra): PDE5-A21-1

Test article manufacturing is planned for October, and animal dosing is expected in November/December. The erectile dysfunction market was worth $4.8 Billion in 2018 and expected to reach $7.1 billion in 2024. Phosphodiesterase-5 inhibitor (PDE5) drugs work using a process of vasodilation, and most are considered to be slow-acting, requiring 1-2 hours to reach peak levels in the bloodstream for maximum effectiveness. Lexaria has repeatedly evidenced a greatly reduced delivery time of another drug that encourages vasodilation - DehydraTECH CBD - and theorizes whether DehydraTECH might likewise deliver PDE5 drugs more quickly and effectively. Some of the most popular existing erectile dysfunction drugs have seen their primary patents expire. DehydraTECH for PDE5 drugs is patent pending.

All scheduling is subject to change, postponement, or even cancellation, but as of the date

of this press release are reasonable expectations. All studies referenced within this press release are fully funded from existing Company resources and are being performed by third-party laboratories to ensure study objectivity.

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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