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Lexaria's DehydraTECH Significantly Enhances Delivery of Colchicine in Study VIRAL-A20-3

Possible Benefits for Treating SARS-CoV-2/COVID-19 and mRNA Vaccine Side Effects

KELOWNA, BC / ACCESSWIRE / July 21, 2021 /Lexaria Bioscience Corp. (NASDAQ:LEXX)(NASDAQ:LEXXW) (the "Company" or "Lexaria"), a global innovator in drug delivery platforms is pleased to announce that its tolerability and pharmacokinetic study VIRAL-A20-3 has been completed with positive results.

This study demonstrated that DehydraTECH™ enabled colchicine, the latest of several drugs Lexaria has successfully tested with known SARS-CoV-2 antiviral properties, benefited from our proprietary formulation and processing, resulting in increased delivery:

Drug	**Cmax* % Improvement** (ng/mL)	**Control** (ng/mL)	**AUClast** % Improvement** (hr·ng/mL)	**Control** (hr·ng/mL)
Colchicine	31.97 **91%** (p=0.0005)	16.73	104.43 **167%** (p=0.0028)	38.97

Colchicine is an approved therapeutic with anti-inflammatory effects that is principally used to treat gout and conditions such as cardiac inflammation (i.e., pericarditis), and also has potent effects in mitigating the cytokine storm associated with SARS-CoV-2/COVID-19. Colchicine is occasionally recommended and used to treat emergent pericarditis in children in cases where this form of cardiac inflammation develops following administration of mRNA COVID-19 vaccines.

Similar to other antiviral agents that Lexaria has processed with DehydraTECH (e.g., darunavir, efavirenz, remdesivir's nucleoside analogue GS-441524 and ebastine), oral colchicine in its available forms today exhibits diminished bioavailability in humans, which Lexaria believes it can improve upon for better safety and efficacy outcomes. Currently available oral colchicine demonstrates bioavailability of about 45%.

Colchicine is also known to have a narrow therapeutic index, meaning the distinction between toxic and non-toxic doses is marginal and there could be significant benefits in allowing its dosing to be reduced while maintaining therapeutic delivery levels. Lexaria hopes to improve the bioavailability of colchicine to a sufficient level which could potentially allow for lower overall dosing requirements.

Study VIRAL-A20-3 was performed using Sprague-Dawley rats, with twenty rats dosed via oral gavage using either DehydraTECH or control colchicine formulations (i.e,. 10 rats per test article). The study evaluated peak concentration ("Maximum Concentration" or "Cmax"*) and total drug delivery into the rodent bloodstream ("Area Under the Curve" or "AUClast**"). The study was conducted by an independent, premier animal testing laboratory located in the United States.

The study also examined absorption with two other antiviral drugs previously untested by Lexaria. The bloodstream delivery findings were unremarkable with these two drugs, which Lexaria believes was correlated to analytical methodology limitations related to discerning blood levels for the two drugs in question. Further work would be required should Lexaria decide to pursue additional testing with these two drugs, however, Lexaria will likely focus on DehydraTECH-processed colchicine and other antiviral drugs it has tested given the superior results already demonstrated.

Lexaria will summarize and provide guidance on the 2021 antiviral program to date and next steps it is planning in an imminent press release. Chris Bunka, CEO, is responsible for the accuracy of this press release. The Company is not making any express or implied claims that its products have the ability to eliminate, cure or contain the COVID-19 pandemic (or SARS-CoV-2 or novel Coronavirus) or any other virally induced diseases at this time.

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 20 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.

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