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Significant Bioavailability Results in Human Clinical Trial using Lexaria's DehydraTECH (TM) Powered TurboCBD (TM) Capsules

KELOWNA, BC / ACCESSWIRE / August 1, 2018 /Lexaria Bioscience Corp. (OTCQX: LXRP) (CSE: LXX) (the "Company" or "Lexaria"), a drug delivery platform innovator, is pleased to report significant bioavailability results from its randomized, placebo-controlled, double-blind European human clinical study that evaluated TurboCBD™ - a proprietary, DehydraTECH™ powered, cannabidiol ("CBD") fortified hemp oil capsule developed by Lexaria. The degree and speed of CBD absorption into blood plasma and potential cardiovascular and cognitive performance enhancement in 12 healthy male volunteers were studied.

Key bioavailability data highlights from the study comparing the 90 mg dose of Lexaria's TurboCBD™ to a 90 mg dose of a positive control formulation without Lexaria's DehydraTECH™ technology were as follows:

- 30 Minutes: CBD delivered from Lexaria's TurboCBD™ capsules was absorbed much more effectively than from the positive control, delivering 317% more CBD to blood at the 30-minute mark of the study (i.e., 18.4 ng/mL compared to only 4.4 ng/mL on average respectively [95% CI; p=0.051]);
- 60 Minutes: The TurboCBD™ capsules went on to deliver more CBD to the blood at the 60-minute mark (i.e., 38.8 ng/mL) than the positive control capsules were able to reach *at any time* during the 6-hour study, further demonstrating the exceptional rapidity of action and effectiveness of the TurboCBD™ capsules;
- 90 Minutes: The TurboCBD™ capsules further went on to deliver significantly more CBD to the blood (86% more) than the positive control capsules at the 90-minute mark (i.e., 53.0 ng/mL compared to only 28.4 ng/mL respectively [95% CI; p=0.034]);
- Through to Study Completion: Lexaria's TurboCBD™ capsules continued to deliver more CBD to blood than the positive control capsules at each subsequent time point in the study through to the 6-hour mark when the study was completed.

These results corroborate and confirm earlier *in vitro* and *in vivo* studies that have evaluated Lexaria's DehydraTECH™ technology and have consistently measured higher levels of drug delivery much more quickly than positive controls with matching CBD concentrations. Although this study evaluated absorption only of CBD and its metabolites, Lexaria believes nearly identical bioavailability enhancement results would be achieved if the cannabinoid

studied was THC instead of CBD.

Time (Minutes)	Blood levels following 90 mg TurboCBD™ (ng/mL)	Blood levels following 90 mg Positive Control (ng/mL)	TurboCBD™ Blood Level % Increase from Positive Control
0	0.0	0.0	n/a
30	18.4	4.4	317%
60	38.8	29.9	30%
90	53.0	28.4	86%
120	56.0	33.9	65%
150	41.8	37.0	13%
180	40.5	26.4	53%
240	22.0	16.1	37%
300	14.5	9.2	58%
360	10.3	7.5	38%

These study findings were of particular interest relative to a Mount Sinai study previously completed that tested orally administered CBD supplied by market leader GW Pharmaceuticals PLC at much higher doses of 400 mg and 800 mg *[J.Addict. Med. 2015 May-Jun; 9(3): 204-210]*. CBD delivered in the Mount Sinai study achieved peak blood levels of 181 ng/mL and 221ng/mL respectively at their 400 mg and 800 mg doses tested, respectively. These values equate to blood levels of 40.77 ng/mL and 24.87 ng/mL, respectively, when adjusted for concentration to match Lexaria's 90 mg dosage findings described above.

As such, the Mount Sinai results, although potentially influenced by concomitant opioid administration within that study, were substantially lower than the 56.0 ng/mL peak blood level achieved with Lexaria's TurboCBD™ capsules, and it is further interesting to note that

the peak blood levels in the Mount Sinai study required three hours to achieve whereas the Lexaria formulation met and eclipsed these levels when adjusted for dose concentration within only the first 60 minutes of the Lexaria study as noted above. It is also particularly interesting to note the rapidity by which Lexaria's TurboCBD™ capsules at the 90 mg dose achieved concentration-adjusted blood levels that outperformed those from the Mount Sinai study: at the 30-minute time interval, we estimate the TurboCBD™ concentration-adjusted CBD blood level to have been over 900% higher than the levels achieved in the Mount Sinai study.

Lexaria was also pleased that, as expected, blood levels of THC, 11-OH-THC, and THCCOOH were non-detectable, highlighting the absence of THC and the extraordinary CBD purity within the TurboCBD™ capsules. Additional data is still being gathered and analyzed from the study, including other pharmacokinetic study parameters including metabolic data and the outcomes of the cardiovascular and cognitive performance measures that the study also evaluated. Lexaria will provide updates on these and other findings as they become available.

Few companies around the world have advanced to the state of achieving successful appropriately controlled (i.e., randomized, placebo-controlled and double-blinded) human clinical trial results utilizing cannabinoids. Increasing regulatory scrutiny of CBD by agencies such as the US Food and Drug Administration could result in the necessity of clinical evidence in the future to enable commerce in products containing CBD.

Lexaria has postulated that its DehydraTECH™ technology may effect lymphatic lacteal absorption and delivery that may bypass first-pass liver metabolism, and that this method of action may be responsible for Lexaria's consistently fast and efficient results as demonstrated in this human clinical test and in recent *in vivo* animal tests for delivery of nicotine. Lexaria is pleased that its DehydraTECH™ technology has, to date, repeatedly produced evidence of success within human studies.

About Lexaria

Lexaria Bioscience Corp. has developed and out-licenses its disruptive delivery technology that promotes healthier ingestion methods, lower overall dosing and higher effectiveness of lipophilic active molecules. Lexaria has multiple patents pending in over 40 countries around the world and has patents granted in the USA and in Australia for utilization of its DehydraTECH™ delivery technology. Lexaria's technology provides increases in intestinal absorption rates; more rapid delivery to the bloodstream; and important taste-masking benefits, for orally administered bioactive molecules including cannabinoids, vitamins, non-steroidal anti-inflammatory drugs (NSAIDs), nicotine and other molecules.

www.lexariabioscience.com

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FORWARD-LOOKING STATEMENTS

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The CSE has notreviewed and does not accept responsibility for the adequacy or accuracy ofthis release.

SOURCE: Lexaria Bioscience Corp.