

LEXARIA BIOSCIENCE CORP.

NASDAQ: LEXX

INVESTOR CONTACT

Phone: 250-765-6424 ext. 202 ir@lexariabioscience.com

DRUG DELIVERY PLATFORM INNOVATOR

Lexaria Bioscience Corp's. (Nasdaq: LEXX) proprietary drug delivery technology, DehydraTECH[™], improves the way active pharmaceutical ingredients ("APIs") enter the bloodstream through much more effective oral ingestion methods. The Company's technology can be applied to many different ingestible product formats, including liquids, tablets, capsules, and more. DehydraTECH has repeatedly demonstrated 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. In 2021, the Company is focused on three main areas: Antiviral drugs (including for potential use against COVID-19), CBD for Hypertension, and Oral nicotine dosing to replace smoking or vaping. Lexaria has licensed DehydraTECH to multiple companies, including Altria Corp for the development of smokeless, oral-based nicotine products. DehydraTECH is in widespread commercial use in the CBD industry for cannabinoid beverages, edibles, and oral products. Lexaria owns and operates a federally-licensed research laboratory and holds a robust intellectual property portfolio with 23 patents granted and over 50 patent applications pending around the world. For more information, please visit www.lexariabioscience.com.

Investment Highlights

- Disruptive drug delivery technology with multiple opportunities for success in antivirals, nicotine, cannabinoids, and other Active Pharmaceutical Ingredients ("APIs")
- Revenue growth of more than 150% from 2020 to 2021
- Pharmacokinetic ("PK") studies shown to deliver higher quantities of API in less time for: CBD for hypertension, Oral nicotine for reduced-risk and Antiviral drugs for COVID-19 and other infectious diseases
- Up list to Nasdaq Capital Markets and raised US\$11 million in January 2021; US\$4 million raised in July 2021
- Investigational New Drug (IND) process begun for DehyrdaTECH-CBD as a prospective registered treatment for hypertension with the Food and Drug Administration (FDA)

DehydraTECH™

- Patented formulation and dehydration processing method changes how the body detects and absorbs drugs
- 23 patents granted (>50 pending) covering method-of-use, composition-of-matter and medical treatment claims

Patented DehydraTECH[™] Process



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2021/2022 Study Program

- <u>HYPER-A21-1</u> Rodent study completed (n=10) demonstrating significant enhancement in CBD delivery using DehydraTECH - Up to 2,178% more CBD delivered into bloodstream and up to 1,737% more CBD delivered into brain tissue
- <u>HYPER-A21-2</u> Rodent study completed (n=10) demonstrating strongest CBD absorption results ever recorded using DehydraTECH - New formulation delivers up to 2,708% more CBD into bloodstream
- <u>HYPER-H21-1</u> Human clinical study (n=24) evidencing a rapid and sustained drop in blood pressure with DehydraTECH-CBD and excellent tolerability
- <u>HYPER-H21-2</u> = Human clinical study (n=16) Hypoxic Pulmonary Vasoconstriction study; evidences up to a remarkable 23% decrease in blood pressure with patented DehydraTECH-CBD relative to placebo and confirms DehydraTECH-CBD reduces arterial stiffness
- <u>VIRAL-C21-3</u> In vitro screening assay completed using a primate cell line, VERO-E6, determined remdesivir and ebastine processed with DehydraTECH were effective at inhibiting the COVID-19 SARS-CoV-2 virus
- <u>VIRAL-A20-2</u> Rodent study completed (n=40) DehydraTECH enables up to three-fold increase in oral delivery of antiviral drugs, Remdesivir and Ebastine
- <u>VIRAL-MC21-1</u> Successfully confirmed Lexaria's molecular characterization study objectives, demonstrating DehydraTECH processing and formulation technology does not create a covalently bonded new molecular entity ("NME") and that each drug tested remained stable and did not undergo change in chemical structure. These findings are strongly supportive of accelerated regulatory filings such as the 505(b)(2) pathway permitted by the Food and Drug Administration ("FDA") and other international regulators
- <u>VIRAL-A20-3</u> Rodent PK study completed (n=20) demonstrating significant enhancement in antiviral drug delivery using DehydraTECH-enabled Colchicine</u>. Possible benefits for treating SARS-CoV-2/COVID-19 and mRNA vaccine side effects
- <u>NIC-A21-1</u> DehydraTECH-oral nicotine delivery peaked in bloodstream 10x to 20x faster than controls and peak levels achieved were up to 10x higher than controls

Human Clinical Study: TurboCBD[™] - Lexaria's Oral CBD Product

- Competitor delivers virtually zero CBD at 30 minutes
- Lexaria quicker "on" and quicker "off"



Pharmacokinetic comparsion of the ingestion of Turbo 90mg (soild circles; black), 90 mg (dashed open circles; black) and PTL101-100mg (dashed open squares; grey). Only mean data shown. PTL101-100mg data via gelatin matrix pellets, modified from Atsmon et al., 2018.



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Additional 2022 DehydraTECH Investigations Cumulative Market Value Over \$245 Billion

Planned pharmacokinetic ("PK") studies will evaluate DehydraTECH's ability to improve quantity of drug delivered and speed with which it is delivered, in all of these areas:

	Size		Future	Future Size	
DehydraTECH Markets	US \$bn	Year	US \$bn	Year	
CBD	2.7	2021	111.0	2030	
Cardiovascular Drugs	87.8	2020	107.8	2025	
Antivirals	52.1	2021	66.7	2025	
Oral Cannabinoid	18.4	2021	46.6	2025	
Human Hormones	32.6	2020	46.5	2022	
NSAIDs	17.1	2021	31.0	2031	
Oral Mucosal Nicotine	19.6	2020	27.3	2028	
Epilepsy	10.3	2020	16.6	2031	
PDE5 Inhibitors	1.4	2020	5.9	2026	
Nicotine Replacement	2.8	2020	3.9	2028	
Vitamin D3	1.1	2021	1.7	2026	

LEXARIA SUBSIDIARIES

Lexaria Nicotine LLC (Majority-Owned)

- Altria Group international license rights for undisclosed royalty
- Research and Development agreement with British American Tobacco



Lexaria Pharmaceutical Corp. (Wholly-Owned)

Chris Bunka, Chairman & CEO

• Launched several successful private and

public companies since the late 1980's

• Extensive experience in the capital markets,

corporate governance, M&A and finance

Named inventor on multiple patent

• Programs commenced to prove delivery effectiveness in antiviral therapies for COVID-19/SARS-CoV-2 and other infectious diseases such as HIV, HSV, Influenza, EBV, HEP, CMV

Lexaria Hemp Corp. (Wholly-Owned)

innovations

- Clinically proven to increase rate and extent of orally ingested CBD (<u>https://www.ncbi.nlm.nih.gov/pubmed/31512143</u>)
- Established North American partnerships generating revenues from DehydraTECH technology



MANAGEMENT



John Docherty, M.Sc., President & Director

- Specialist in development of drug delivery technologies
- Former President and COO of Helix BioPharma Corp. (TSX: HBP)
- Named inventor on multiple issued and pending patents