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Lexaria BIOSCIENCE

Drug Delivery Platform Innovator
With Multiple Mainstream Applications

Investor Presentation
Q1 2023

Lexaria Bioscience Corp.
NASDAQ:LEXX | NASDAQ:LEXXW

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Disclaimer

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No statement within has been evaluated by the Food and Drug Administration, and no product or service is intended to diagnose, treat, cure or prevent any disease.

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Lexaria At A Glance and Takeaways 01

Lexaria Bioscience At A Glance

- Lexaria's DehydraTECH is a **disruptive, patented drug delivery technology** that is more effective at delivering Active Pharmaceutical Ingredients ("APIs") into the bloodstream and into brain tissue
- DehydraTECH is applied to **multiple** ingestible product formats such as tablets, capsules, oral suspensions, mouth-melts and others
- Pharmacokinetic ("PK") studies shown to **deliver higher quantities of APIs in less time:**
  - **Cannabidiol ("CBD") for hypertension**
  - **Oral nicotine for reduced-risk**
  - **Antiviral drugs for COVID-19 and other infectious diseases**
- **28 patents granted and many more patent applications pending** around the world for DehydraTECH technology designed for fast acting, less expensive and more effective oral drug delivery*
- **Investigational New Drug ("IND") enabling program underway for** DehydraTECH-CBD as a prospective registered treatment for hypertension with the U.S. Food and Drug Administration ("FDA")

*Based on subjective and objective clinical testing in 82 human volunteers with CBD, THC and nicotine formulations, *in vivo* animal testing in 316 rodents with CBD and nicotine formulations and hundreds of thousands of commercial product servings of CBD and THC formulations by Lexaria's licensing partners.

Takeaways

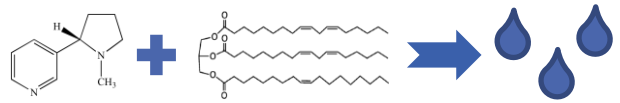
- DehydraTECH drug delivery technology has **multiple mainstream applications** in cannabinoids, oral nicotine, antiviral therapies, phosphodiesterase inhibitors and other APIs
- DehydraTECH is **faster and more effective at delivering drugs** into bloodstream and brain tissues
  - Increases bioavailability, improves speed of onset, reduces drug administration costs and masks unwanted tastes
- DehydraTECH **pipeline addresses serious unmet patient needs with substantial market potential**
- **Licensing agreements** with Fortune 100 companies
- Continued **commercialization through licensing and partnerships:**
  - **Altria**, a world-leading tobacco company, has licensed DehydraTECH for use in the US and **agreed to pay royalties on any oral nicotine product sales**
  - Research and/or discussions with **British American Tobacco** and other CPG and pharmaceutical companies for DehydraTECH use

DehydraTECH Patented Technology and Benefits 02

Patented DehydraTECH Drug Delivery Technology

✓ Speeds up onset ✓ Increases bioavailability ✓ Improves potency/effectiveness*

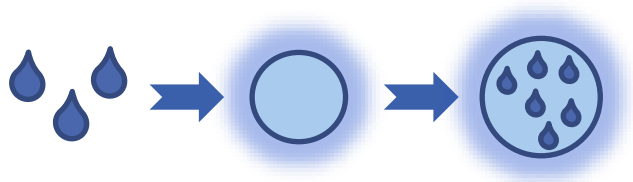
1 Combine Active Pharmaceutical Ingredient with Fatty Acid Oil



API

Fatty Acid (e.g., LCFA = high oleic sunflower oil)

2 Apply to food / carrier particles



Sorbitol, Gum Arabic, etc.

3 Perform dehydration synthesis procedure

4 Render as powder or liquid for use in desired final form factor

*Based on subjective and objective clinical testing in 82 human volunteers with CBD, THC and nicotine formulations, *in vivo* animal testing in 316 rodents with CBD and nicotine formulations and hundreds of thousands of commercial product servings of CBD and THC formulations by Lexaria's licensing partners.
API = Active Pharmaceutical Ingredient
LCFA = Long Chain Fatty Acid (e.g., oleic acid rich sunflower oil)

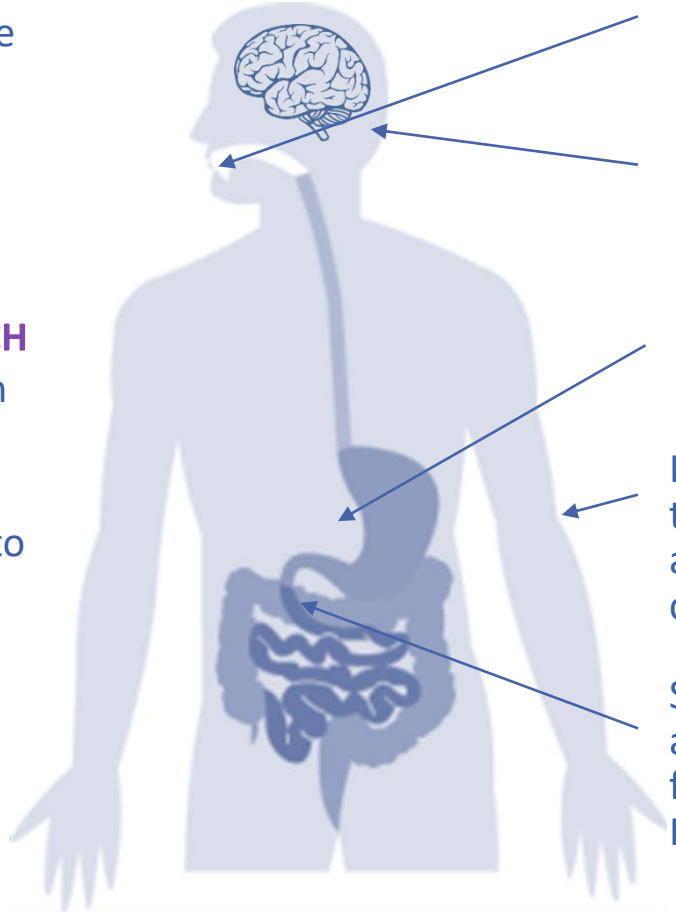
How is DehydraTECH Believed to Work?

DehydraTECH works symbiotically with existing physiological systems to enable improved and more rapid absorption into the bloodstream and brain tissues.

DehydraTECH combines long chain fatty acids (LCFAs) with active pharmaceutical ingredients (APIs). After being orally ingested, the **DehydraTECH** -enabled API then enters the upper intestine, which is only minutes after being administered.

The **DehydraTECH**-enabled API is then delivered into the lymphatic lacteals primarily and transported across the upper intestinal wall - instead of going into the hepatic vein destined for the liver.

Thus, drugs enter blood circulation without being metabolized first by the liver. It allows the API in its native form, unchanged, to circulate through the bloodstream and to receptor cells in the brain – the **DehydraTECH** advantage.



Fatty acids are believed to block and shunt bound APIs away from bitter taste receptors(1)

LCFA associated APIs enter brain through fatty acid transport proteins(2)

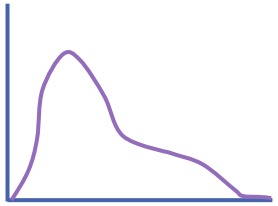
LCFAs influence gastric cholecystokinin production and motility(3)

LCFA-associated APIs traverse epidermis through fatty acid transport proteins(4) and also influence lipid fluidization of the stratum corneum(5)

Small intestine quickly absorbs LCFA-associated APIs into lymphatics (bypassing first pass liver effect) vs. Medium Long Chain Fatty Acids via the liver(6)

(1) Coupland & Hayes (2014). Pharm Res. Nov 31(11); 2921-2939 (2) Soehngen et al., (1998). Arthritis & Rheumatism. Vol 31, No. 3. (2) https://onlinelibrary.wiley.com/doi/10.1111/j.1471-4159.2011.07245.x (3) https://www.gastrojournal.org/article/S0016-5085(99)70227-1/fulltext#back-bib2 (4) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3943485/ (5) https://www.researchgate.net/publication/277522269_Penetration_enhancing_effects_of_selected_natural_oils_utilized_in_topical_dosage_forms (6) Based on dynamic light scattering particle size evaluation studies conducted by Canada's National Research Council as announced July 16, 2020.

DehydraTECH - Patented Technology Potential Benefits

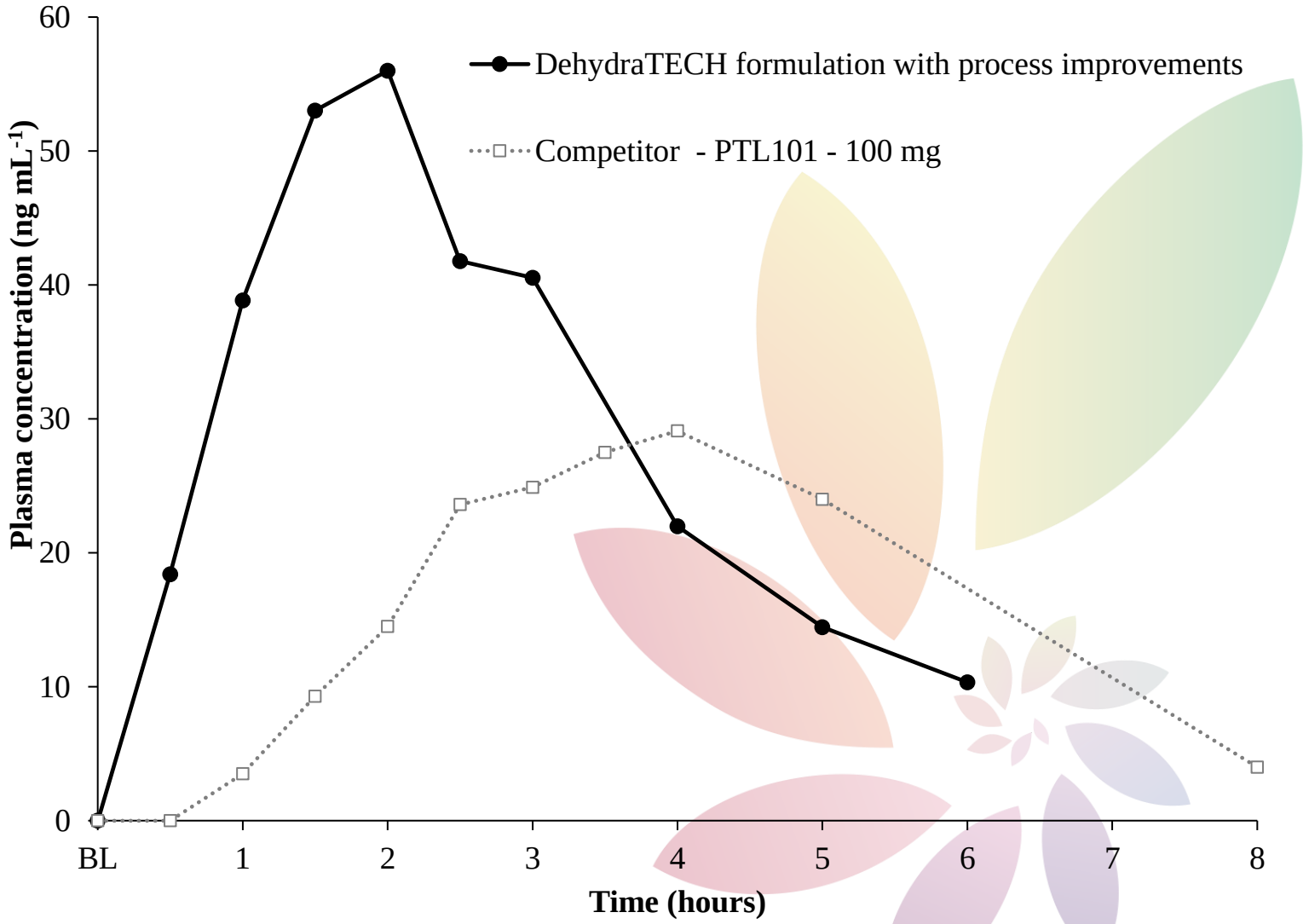
Masks unwanted taste (1)	Improves speed of onset	Increases bioavailability	Increases brain absorption	Reduces Drug Administration Costs
				
Eliminates the need for sugar-filled edibles	Effects are felt in minutes(2)	Much more effective at delivering drug into bloodstream(3)	Testing suggests up to 27x improvement(4)	Higher ratio of drug delivery expected to lower overall drug costs

Patented drug delivery technology improves oral administration of Active Pharmaceutical Ingredients

(1) Based on subjective clinical testing in 30 human volunteers with CBD, THC and nicotine formulations and hundreds of thousands of commercial product servings of CBD and THC formulations by Lexaria's licensing partners.
(2) Based on subjective clinical testing in 70 human volunteers with CBD, THC and nicotine formulations and hundreds of thousands of commercial product servings of CBD and THC formulations by Lexaria's licensing partners.
(3) Based on objective clinical testing in 12 human volunteers with CBD formulations, and *in vivo* animal testing in 316 rodents with CBD and nicotine formulations
(4) https://ir.lexariabioscience.com/news-events/press-releases

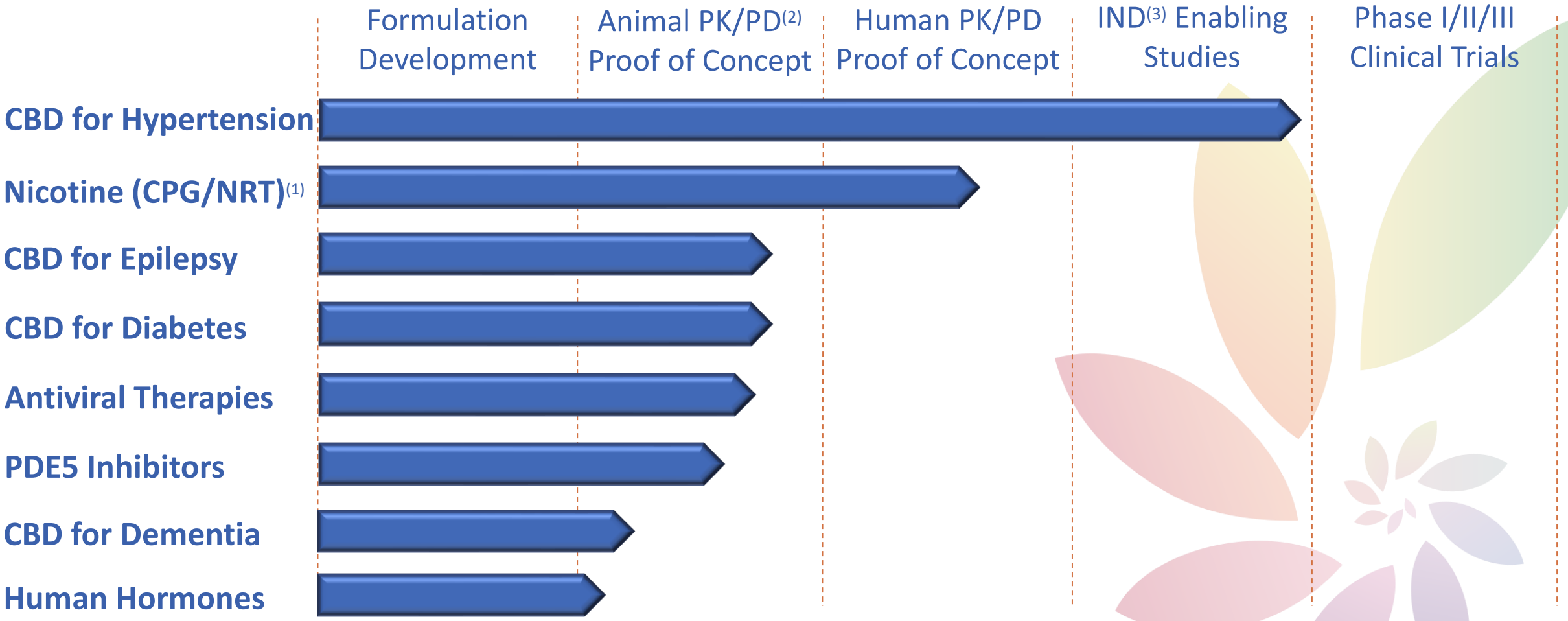
DehydraTECH Oral CBD Human Clinical Study

- 2018 European human clinical study (n=12)
- Double-blind, 90 mg CBD dose of DehydraTECH (“TurboCBD”)
- **Higher CBD delivery** throughout entire study
- **Higher cerebral perfusion** shown vs. baseline ($p < 0.001$)
- **Lower blood pressure (“BP”)** shown vs. baseline ($p < 0.05$)



Pipeline and Addressable Markets 03

DehydraTECH Pipeline
Addressing Serious Unmet Patient Needs



(1) Consumer Packaged Good/Nicotine Replacement Therapy (2) Pharmacokinetic/pharmacodynamic (3) Investigational New Drug

Market Value of 2023 DehydraTECH Investigations

Pharmacokinetic studies are evaluating **DehydraTECH's ability to improve quantity** of drug delivered and **speed** with which it is delivered, **in all of these areas:**

	Size		Future Size	
DehydraTECH Markets	**US $bn**	**Year**	**US $bn**	**Year**
Tobacco	815.8	2023	**908.3**	2026
Nicotine Replacement	69.5	2023	**147.9**	2028
CBD	6.3	2023	**111.8**	2030
Cardiovascular Drugs	99.9	2023	**107.8**	2025
Antivirals	59.4	2023	**66.7**	2025
Epilepsy	18.8	2023	**20.3**	2026
Human Hormones	6.4	2023	**13.0**	2026
PDE5 Inhibitors	5.5	2023	**6.0**	2025

Commercial Opportunities and Upcoming Milestones

04

PREMIER WELLNESS SCIENCE

Bevnology

ValconMedical

Cannadips™ HUMBOLDT, CA

AnodGen Bioceuticals Bringing Science to Life

Commercial Opportunities

- Lexaria has **demonstrated its ability to enter relationships with Fortune 100 companies**, and will continue to foster new partnerships
- Actively developing **lead product pipeline candidates** in the areas of:
    - CBD for hypertension and potentially heart disease
    - Reduced risk / replacement therapy oral nicotine products
    - Antiviral drugs
- Lexaria engages **strategic partnerships with third party companies** interested in exploring formulation opportunities with their specific APIs of interest
- **Lexaria out-licenses its technology** in exchange for **up-front fees**, **milestone payments** and/or **royalty payments**
- **Lexaria generating revenues now** from CPG-destined formulations to corporate clients on a toll processing basis

PRODUCT LICENSING INQUIRIES:
info@LexariaBioscience.com

Upcoming Milestones - Hypertension

Regulatory

- Lexaria **completed** a highly constructive pre-IND application meeting with the **FDA**, with a view to **IND filing** for Lexaria's **DehydraTECH**-CBD as a potential registered treatment for hypertension with the **FDA in 2023**

Latest Advanced Human Clinical Study ("HCS"):

HYPER-H21-4 using **DehydraTECH-CBD evidenced**:

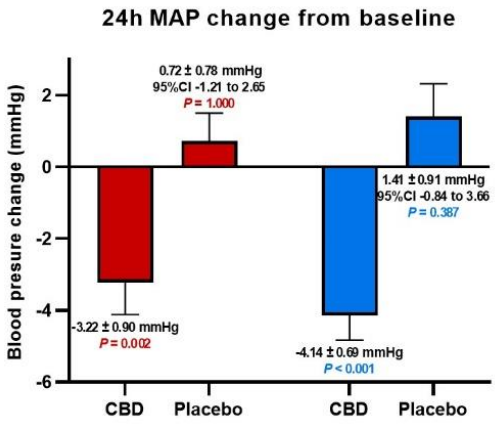
- **Exceptional safety and tolerability**
- **Statistically significant lowering of 24-hour ambulatory blood pressure ("BP")**
- **BP lowered for the entire 5-week study duration**
- **BP lowered both for patients currently taking other antihypertensive drugs as well as patients not taking any other antihypertensive drugs**
- **Superior human blood absorption levels**
- **Potential novel mechanism of action in reducing blood pressure**

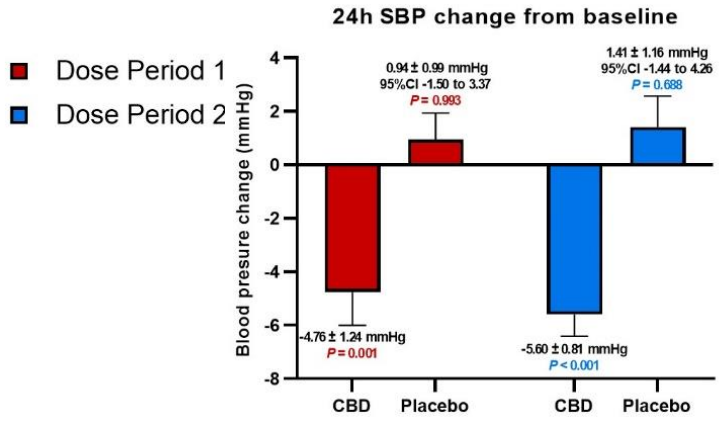
- If this study was registered with FDA, it would likely be a Phase IB/IIA study
- **Biotech companies can be incredibly valuable even if they are years away from generating revenue**. According to Bay Bridge Bio, typical company valuations at the start of Phase I are **USD $88M** and at the start of Phase II is **USD $248M**

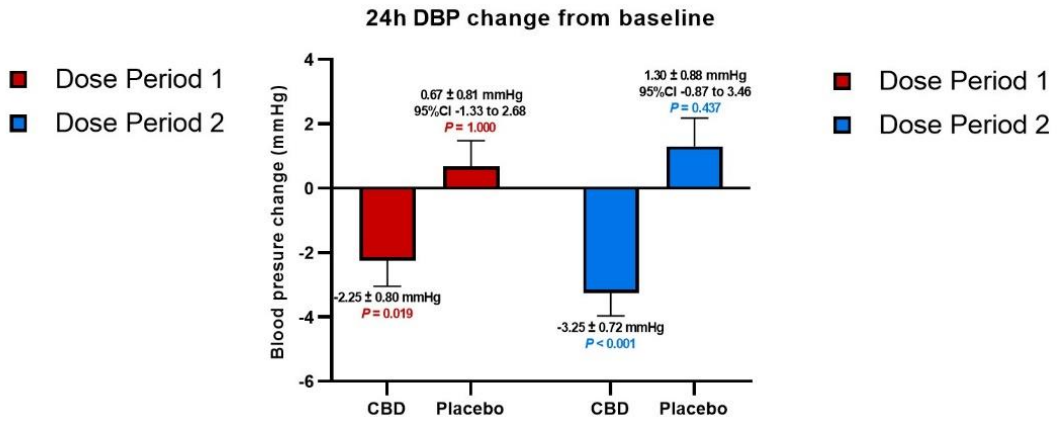
Lexaria's Advanced Hypertension Program Results

Lexaria's Advanced Hypertension Program Delivers Results with No Serious Adverse Effects:

- 2018 - 12 person PK HCS evidenced 317% more CBD delivered to blood at 30-minutes
- 2021 - HYPER-H21-1: 24 person HCS **evidenced rapid and sustained drop in blood pressure**
- 2021 - HYPER-H21-2: 16 person HCS **evidenced up to a 23% average reduction in overnight blood pressure and reduced arterial stiffness**
- 2021 - HYPER-H21-3: 16 person HCS **reduced attenuated pulmonary artery systolic pressure** ("PASP") **by ~5 mmHg or 41%** overall in male participants
- 2022 - HYPER-H21-4: 66 person HCS evidenced:
  - **Exceptional safety and tolerability, statistically significant lowering of 24-hour ambulatory blood pressure ("BP"), BP lowered for the entire 5-week study duration, BP lowered both for patients currently taking other antihypertensive drugs as well as patients not taking any other antihypertensive drugs, superior human blood absorption levels and demonstrated a potential novel mechanism of action in reducing blood pressure**







Upcoming Milestones - Oral Nicotine

Oral Nicotine

- **Nicotine oral mucosal animal absorption study, NIC-A21-1**, delivered outstanding performance utilizing **DehydraTECH** -nicotine; including **10x to 20x reduction in time** to deliver peak levels of nicotine to bloodstream and **2x to 3x higher levels of nicotine**

Human Nicotine Study NIC-H22-1 Begins Dosing

- 36 person HCS meant to confirm superior oral buccal tissue absorption performance of **DehydraTECH** nicotine compared to existing leading brands such as Zyn (**Swedish Match**) and ON! (**Altria**)
- Lexaria's pursuit of global licensing opportunities expected to be significantly enhanced if study results are positive
- The global market for the oral nicotine pouch category was US$2.33 billion in 2020 and is growing at a rapid CAGR of 30.7% and is **expected to reach $21.84 billion in 2027**

Upcoming Milestones - Epilepsy

Epilepsy Study EPIL-A21-1

- Animal study comparing **DehydraTECH**-CBD to that of **Epidiolex®**
- **Epidiolex®** is the first and only FDA-approved CBD medication for the treatment of seizures
- The **results to-date demonstrate** the performance of **DehydraTECH-CBD** to **reduce or eliminate seizure activity in animals** and **even surpass the performance of one of the world's leading anti-seizure medications, Epidiolex®**
- Overall, **DehydraTECH-CBD appeared to demonstrate effectiveness at lower doses and more rapidly than Epidiolex®**
- Lexaria is always searching for the **lowest possible efficacious dose levels** of the drugs it formulates with **DehydraTECH in order to try to minimize adverse side effects**
- **Additional work is underway** in study program EPIL-A21-1 with a final model induced by electrical stimulation study designed to establish an ED50 (i.e., the dose required to achieve seizure inhibition in 50% of the animals tested) for **DehydraTECH**-CBD

Upcoming Milestones - Diabetes

Diabetes Study DIAB-A22-1

- Lexaria's DehydraTECH-CBD diabetes study evidenced:
  - **Weight Loss:** Four days after the start of dosing with DehydraTECH-CBD, the obese animals began to lose weight. The weight loss was maintained throughout the 8-week study duration.
  - **Reduced Triglyceride Levels:** Animals dosed with DehydraTECH-CBD demonstrated statistically significant reductions in triglyceride levels. By the end of the study, triglyceride levels in the animals receiving 30 mg/Kg of DehydraTECH-CBD was over 25% lower than that of the untreated obese animals.
  - **Cholesterol Levels:** Animals dosed with 30 mg/Kg trended toward increased levels of HDL 'good' cholesterol. These findings support improved physiological function relative to the diabetic state.
  - **General Activity:** Obesity is often accompanied by reduced activity levels. The 30 mg/Kg dose of DehydraTECH-CBD resulted in a statistically significant improvement in locomotor activity compared to the untreated obese control animals.
- **Positive findings from Lexaria's first diabetes study of DehydraTECH-CBD indicates many prospective benefits worthy of further investigation together, perhaps, with other drugs that further help to control glucose levels directly**

Active Pharmaceutical Ingredients (“APIs”) 05

- CBD
- Nicotine
- Other Areas of Interest

DehydraTECH-CBD Commercialization
Treatment of Hypertension

- The World Health Organization (WHO) estimates that there are **1.13 billion people worldwide** with hypertension. **The global antihypertensive drugs market** is expected to reach **$28.7 billion by 2026**
- The US National Center for Health Statistics estimated that **108 million adults have hypertension**
  - **Three out of four** US adults with hypertension **do not have it under control**
- These unmet needs highlights **demand for new approaches to lower blood pressure**
- **Lexaria's commercial options include**:
  - Lexaria **completed** a pre-IND application meeting with the **FDA**, with a view to **IND filing** in **2023**
  - **Expedited 505(b)(2) NDA** potential for rapid market launch
  - Industry partnering with an established pharmaceutical company active in the hypertension and/or cannabidiol therapeutics space (e.g., Jazz Pharmaceuticals' Epidiolex; $196.2M in Q3 2022)

Human Clinical Study HYPER-H21-2 evidences up to a remarkable 23% decrease in blood pressure with patented DehydraTECH-CBD relative to placebo

Sources: Centers for Disease Control and Prevention Website., National Center for Health Statistics. National Health and Nutrition Examination Survey. July 2020 , Hypertension Prevalence and Control Among Adults: United States, 2015-2016. NCHS Data Brief, No. 289. October 2017, https://www.alliedmarketresearch.com/antihypertensives-market, https://investor.jazzpharma.com/news-releases/news-release-details/jazz-pharmaceuticals-announces-full-year-and-fourth-quarter-2021

DehydraTECH Oral Nicotine, Safer Nicotine Alternative For The World's 1.1 Billion Smokers To Kick The Habit

DehydraTECH Oral Nicotine Strategic Licensing

ALTRIA GROUP LICENSE

- **Altria has funded R&D and licensed DehydraTECH** for use in the US and **agreed to pay royalties** on any **oral nicotine product sales**

Powered by Lexaria BIOSCIENCE (Majority Interest) + Altria (Minority Interest) → Lexaria NICOTINE

- **Research collaboration** also in process with **British American Tobacco** and **discussions underway with other Fortune 100 companies** for **DehydraTECH** oral nicotine use

DehydraTECH-oral nicotine absorption study NIC-A21-1 delivery peaked in bloodstream 10x to 20x faster than controls and peak levels achieved were up to 10x higher than controls

Human Nicotine Study NIC-H22-1 to evidence that processing purified nicotine with DehydraTECH leads to superior buccal-tissue absorption and reduced negative experiences compared to currently sold brands such as ON! and Zyn

Other Pharmacuetical Areas of Interest

Antivirals

- **DehydraTECH improved the delivery of both** Protease Inhibitor (Darunavir) and Reverse Transcriptase Inhibitor (Efavirenz) **drugs exhibited improved bioavailability rate as high as 54%**, these two classes of drugs are currently in use against HIV/AIDS and under investigation against SARS-CoV-2/COVID-19

Human Hormones

- Evaluate the ability of **DehydraTECH to enhance the delivery characteristics of estrogen**.
- Estrogen helps to control the menstrual cycle but also controls cholesterol and protects bone health(1)

Dementia

- Evaluate **DehydraTECH**-CBD with and without nicotine **for the potential treatment of dementia**
- Alzheimer's disease is the most common form of dementia and accounts for at least 60% of all cases, and nicotine is already showing promising results related to Alzheimer's treatment(2)
- An estimated 55 million people worldwide are currently affected by dementia, with 78 million expected to be living with some form of dementia by 2030(3)

(1) https://www.endocrine.org/patient-engagement/endocrine-library/hormones-and-endocrine-function/reproductive-hormones (2) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3466669/ (3) https://www.mordorintelligence.com/industry-reports/dementia-drugs-market

Other Pharmacuetical Areas of Interest

Inflammatory Diseases

- Evaluate **DehydraTECH**-CBD to **potentially affect treatment of rheumatoid disease**
- Given CBD's postulated efficacy related to inflammation, Lexaria will explore a possible role for CBD in this area of investigation(1)
- Rheumatic diseases are autoimmune and inflammatory diseases that cause the immune system to attack joints, bones, muscles and organs.
- There are over 100 rheumatic diseases including Fibromyalgia, Lupus, Osteoarthritis, Rheumatoid Arthritis and more(2)

For more research results and investigations, please visit: Lexaria Bioscience

(1) https://www.nature.com/articles/s41419-020-02892-1 (2) https://www.niams.nih.gov/ (3) https://www.cdc.gov/diabetes/basics/diabetes.html

Management, Directors, and Advisors 06

Executives, Directors, and Advisors With Drug Delivery Technology and Capital Markets Expertise

Chris Bunka Chairman & CEO

- Serial entrepreneur involved in several 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 innovations

Gregg Smith Strategic Advisor

- Founder and Private Investor, Evolution VC Partners
- Early JUUL Labs, Pax Labs, Beyond Meat investor
- Member of Sand Hill Angels – active Silicon Valley angel investment group
- Previous Investment Banking roles with Cowen and Company, BOA Merrill Lynch

John Docherty, M.Sc. President

- 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
- Pharmacologist and toxicologist

Dr. Philip Ainslie Scientific & Medical Advisor

- Co-Director for the Centre for Heart, Lung and Vascular Health, Canada
- Research Chair in Cerebrovascular Physiology and Professor, School of Health and Exercise Sciences, Faculty of Health and Social Development at the University of British Columbia

Financial Information 07

Corporate and Financial Information(1)

NASDAQ:LEXX | NASDAQ:LEXXW

Shares Outstanding	5.9 million
Fully Diluted	8.8 million
Share Price	US $3.03
Insider Ownership	9.8%(2)
Average Volume	16,209 (90-day to February 28, 2023)
Market Cap	US $18.0 million
Last Financing (July 2021)	US ~$4 million @US$6.58 warrant exercise
Cash and Equivalents (November 2022)	US ~$4.5 million
Debt	US $0

(1) As of 02/28/2023, source Nasdaq
(2) Does not include derivative holdings

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Investment Highlights 08

Investment Highlights

Blockbuster Potential, Multiple Mainstream Applications In Large Markets

- **DehydraTECH** is a **disruptive, patented drug delivery technology**
- **DehydraTECH** offers **faster and more effective drug absorption** into bloodstream and brain tissues
- **DehydraTECH** pipeline **addressing serious unmet patient needs** with substantial market potential
- **Large addressable market opportunities** for Hypertension, Oral Cannabinoids, Oral Nicotine, and other APIs
- **Executives, directors, and advisors with drug delivery technology and capital markets expertise**

Upcoming Milestones

Hypertension

- **Lexaria completed a highly constructive pre-IND application meeting with the FDA**, with a view to IND filing for Lexaria's **DehydraTECH**-CBD as a **prospective registered treatment for hypertension with the FDA** in 2023

Oral Nicotine

- Compare **DehydraTECH-nicotine pouch performance** to that of existing leading brands such as products including Zyn (Swedish Match) and ON! (Altria)

Dementia and Diabetes

- Lexaria examining potential therapeutic use of **DehydraTECH**-CBD in **Dementia** and **Diabetes**

Continued Commercialization Through Licensing and Partnerships

- **Lexaria has demonstrated its ability to enter formal agreements with Fortune 100 companies**, and will continue to foster new partnerships
- **License agreement in place** with **Altria**, a world-leading tobacco company, who licensed Lexaria's **DehydraTECH** for use in the US and **agreed to pay royalties** on any **oral nicotine product sales**
- **28 patents granted and many more patent applications pending** around the world

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LexariaBioscience.com

Research Results

09

DEHYDRATECH - FASTER AND MORE EFFECTIVE CANNABINOID DELIVERY

Lexaria Bioscience Corp. Completes Successful Skin Absorption Study - (March 13, 2018)

- As much as a **225% increase in CBD permeability** when compared to the highest performing commercial penetration enhancer formulation assessed
- Almost a **1,900% increase in CBD permeability** when compared to a control formulation that was devoid of both the **DehydraTECH** technology or any commercial penetration enhancers

PRESS RELEASE

Cardiovascular Performance Improvements Including Lower Blood Pressure Discovered from Human Clinical Trial using Lexaria's DehydraTECH Powered TurboCBD Capsules – (February 21, 2019)

PRESS RELEASE

- A single 90mg dose of **TurboCBD** provided evidence of **lower blood pressure; higher blood flow to the brain**; **faster delivery onset of CBD into the bloodstream**; and **larger quantities of CBD within the blood** compared to a single 90mg dose of generic CBD

DEHYDRATECH - FASTER AND MORE EFFECTIVE CANNABINOID DELIVERY

Lexaria's DehydraTECH Formulation Delivers 475% More CBD to Bloodstream after 15 Minutes than Conventional Industry Formulations - (May 15, 2019)

PRESS RELEASE

- **DehydraTECH delivered** measurable quantities of **CBD** into blood **in as little as 2 minutes**
- **DehydraTECH delivered 475% more CBD to bloodstream**

Lexaria's DehydraTECH-CBD Achieves Superior Human Blood Absorption Levels - (December 21, 2022)

PRESS RELEASE

- **Lexaria has demonstrated superior CBD blood absorption levels from its patented DehydraTECH-CBD™** relative to those of published, pharmaceutical-grade CBD industry comparators in its recently completed, multi-week human clinical hypertension study HYPER-H21-4
- At the lowest (3.38 mg/kg) and highest (4.46 mg/kg) dose levels tested, **DehydraTECH-CBD resulted in 45.8% and 133.4% higher average blood plasma levels**, respectively, than the figure reported when a higher (5 mg/kg) dose level of non-Lexaria, pharmaceutical-grade CBD was administered

Lexaria's DehydraTECH-CBD Diabetes Study Demonstrates Weight Loss, Improved Triglyceride and Cholesterol - (March 2, 2023)

PRESS RELEASE

- Study **DIAB-A22-1** has **produced** at least **three positive outcomes including weight loss in obese diabetic-conditioned animals, together with improved triglyceride and cholesterol levels**

DEHYDRATECH-CBD HYPERTENSION PROGRAM

Lexaria Issues Successful Results from First 2021 Study, HYPER-A21-1 - (May 6, 2021)

- Up to **2,178% more CBD delivered into bloodstream**
- Up to **1,737% more CBD delivered into brain tissue**

PRESS RELEASE

Lexaria's Newest DehydraTECH 2.0 Formulation Tested in Study HYPER-A21-2 Demonstrates Its Strongest CBD Absorption Results Ever - (May 20, 2021)

- **New formulation delivers** up to **2,708% more CBD into bloodstream**

PRESS RELEASE

Lexaria's DehydraTECH-CBD Lowers Blood Pressure - (July 29, 2021)

- **Human Clinical Study** HYPER-H21-1 **evidences a rapid and sustained drop in blood pressure** with **DehydraTECH-CBD** and **excellent tolerability**

PRESS RELEASE

Lexaria's Human Clinical Study Delivers Effective and Safe Blood Pressure Reduction Results over 24-hour Ambulatory Period - (September 7, 2021)

- **Human Clinical Study** HYPER-H21-2 **evidences** up to **a remarkable 23% decrease in blood pressure** with patented **DehydraTECH-CBD** relative to placebo

PRESS RELEASE

DEHYDRATECH-CBD HYPERTENSION PROGRAM

Lexaria Begins Investigational New Drug (IND) Enabling Program for DehydraTECH-CBD for Hypertension - (September 8, 2021)

- **Lexaria formally beginning the process towards an Investigational New Drug ("IND") application filing with the Food and Drug Administration ("FDA")** with its DehydraTECH-processed cannabidiol ("DehydraTECH-CBD") as **a prospective registered pharmaceutical treatment for hypertension**
- **Positive results** using **DehydraTECH-CBD** support progressing to **FDA IND application**

Lexaria's DehydraTECH-CBD Reduces Arterial Stiffness, Results Confirmed in Human Clinical Study HYPER-H21-2 - (December 8, 2021)

- **DehydraTECH-CBD reduces arterial stiffness,** potentially **broadening its application to treatment** of cardiovascular and other disease states **beyond hypertension**

DEHYDRATECH-CBD HYPERTENSION PROGRAM

Lexaria Receives Independent Review Board Approval For DehydraTECH-CBD Human Clinical Study HYPER-H21-4 - (December 29, 2021)

- HYPER-H21-4 will be **the most comprehensive study ever undertaken by Lexaria**. It is expected to consist of **60 volunteers** between the ages of 45-70 using **three 150 mg doses of DehydraTECH-CBD**, **every day for the 6-week duration** of the study
- **Dosing is expected to begin by April 2022**

Lexaria's Pulmonary Hypertension Clinical Study HYPER-H21-3 Delivers Positive Results - (April 14, 2022)

- **Data from this human study**, together with the findings from Lexaria's other previously announced successful studies**, intended to support the company's plans to seek approvals by the U.S. Food and drug administration**
- **The study findings indicated** a tendency (p=0.1) during 15 minutes of simulated low levels of oxygen (hypoxia) for **reduced pulmonary artery systolic pressure ("PASP") with DehydraTECH-CBD treatment versus placebo**

DEHYDRATECH-CBD HYPERTENSION PROGRAM

Lexaria's DehydraTECH-CBD Hypertension Study HYPER-H21-4 Dosing Complete with No Serious Adverse Events - (July 27, 2022)

- Lexaria has been completed its multi-week human clinical hypertension study HYPER-H21-4, and no serious adverse events have been reported as a result of the dosing

PRESS RELEASE

Lexaria Announces Positive Feedback from Pre-IND Meeting with FDA on DehydraTECH-CBD for Hypertension - (August 10, 2022)

- Significant Milestone Achieved in Commercial Product Development Program
- **Abbreviated 505(b)(2) Strategy Confirmed as an Appropriate NDA Pathway**

PRESS RELEASE

Lexaria's Human Clinical Hypertension Study a Success - (October 27, 2022)

HYPER-H21-4 using DehydraTECH-CBD evidenced:

- Exceptional safety and tolerability with statistically significant lowering of 24-hour ambulatory blood pressure ("BP"), BP lowered for the entire 5-week study duration, BP lowered both for patients currently taking other antihypertensive drugs as well as patients not taking any other antihypertensive drugs, superior blood absorption levels and demonstrated a potential novel mechanism of action in reducing blood pressure

PRESS RELEASE

PRESS RELEASE

PRESS RELEASE

DEHYDRATECH EPILEPSY AND PDE5 PROGRAMS

Lexaria Announces R&D Program to Compare First and Only FDA-Approved Prescription Cannabidiol - (November 1, 2021)

- **New study** EPIL-A21-1 will **compare effectiveness of FDA-approved** Epidiolex to **DehydraTECH-CBD** for **reducing seizure activity**
- **Experts** in **respirology** and **neurobiology** are among the **talented team assembled** to conduct the study which is **designed to investigate if DehydraTECH-CBD has** similar or **superior levels of efficacy in treating seizures** as does the world's only CBD-based seizure medication, Epidiolex

PRESS RELEASE

Lexaria's DehydraTECH-CBD Enhances Performance Compared to Epidiolex® in Seizure Study Program - (November 29, 2022)

- **The results to-date demonstrate** the performance of **DehydraTECH-CBD to reduce or eliminate seizure activity in animals** and to, in some cases, **even surpass the performance of one of the world's leading anti-seizure medications,** Epidiolex**.**

PRESS RELEASE

Lexaria Reports Potentially Ground-Breaking Findings in Sildenafil Animal Study - (February 2, 2022)

- **DehydraTECH-sildenafil delivered 74% more drug** at 4 minutes, than the control

PRESS RELEASE

DEHYDRATECH FOR ANTIVIRALS – FASTER AND MORE EFFECTIVE DELIVERY

Lexaria's Patented Technology Significantly Enhances Oral Delivery of Antiviral Drugs – (December 1, 2020)

- **Improved delivery of both** Protease Inhibitor **(Darunavir)** and Reverse Transcriptase Inhibitor **(Efavirenz)** drugs **exhibited improved bioavailability rate as high as 54%**
- **Demonstrates improved delivery** of **Darunavir** and **Efavirenz**, two classes of drugs **in use against HIV/AIDS** and under investigation against **SARS-CoV-2/COVID-19**

PRESS RELEASE

Lexaria's DehydraTECH-Enabled Remdesivir and Ebastine Effectively Inhibit the COVID-19 SARS-CoV-2 Virus – (June 3, 2021)

- 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**

PRESS RELEASE

DEHYDRATECH FOR ANTIVIRALS – FASTER AND MORE EFFECTIVE DELIVERY

Lexaria Completes Successful Antiviral Drug Molecular Characterization Study With Canada's National Research Council - (July 15, 2021)

- **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

PRESS RELEASE

Lexaria's DehydraTECH Significantly Enhances Delivery of Colchicine in Study VIRAL-A20-3 - (July 21, 2021)

- **Demonstrating significant enhancement** in antiviral drug delivery using **DehydraTECH-enabled Colchicine**
- Possible **benefits for treating SARS-CoV-2/COVID-19** and **mRNA vaccine side effects**

PRESS RELEASE

DEHYDRATECH FOR ORAL NICOTINE – FASTER AND MORE EFFECTIVE DELIVERY

Lexaria Achieves Significant Breakthrough in Alternative Nicotine Delivery Technology - (April 17, 2018)

- **148% improvement** in peak nicotine delivery to the bloodstream relative to controls
- **1,160% faster delivery** of nicotine to the bloodstream than achieved with controls
- **560% higher brain levels** of nicotine where nicotine effects are focused, compared to controls

PRESS RELEASE

Lexaria Bioscience Announces Further Advancement of Edibles Nicotine Testing Delivery Measured Within Minutes - (August 7, 2018)

- **90% more** nicotine **delivered** at 10-minute mark
- **70% more** nicotine **delivered overall** within first 15 mins of study
- **94% more** nicotine **delivered** over the 60 min study period
- **295% higher brain levels** of nicotine where nicotine effects are focused, compared to controls

PRESS RELEASE

DEHYDRATECH FOR ORAL NICOTINE – FASTER AND MORE EFFECTIVE DELIVERY

Lexaria Oral Nicotine Study NIC-A21-1 Delivers Outstanding Results - (October 5, 2021)

- **"White Pouch"** Category growing from $2 billion to $21 billion
- **DehydraTECH-oral nicotine** delivery peaked in bloodstream **10x to 20x faster than controls**
- **Peak levels achieved** were up to **10x higher than controls**

PRESS RELEASE

Lexaria Begins New Nicotine Formulation Creation and Evaluation Program - (April 11, 2022)

PRESS RELEASE

- **Lexaria has entered new agreements with Altria Client Services, LLC**
- Under the terms of these agreements, **Lexaria will receive a fee to provide certain DehydraTECH powder-based nicotine formulations to be evaluated by Altria**. The new agreements are in effect until March 31, 2023

Scientific Appendix 10

LOWER LEVELS OF CBD LIVER METABOLITES ALIGNED WITH THEORETICAL MECHANISM OF ABSORPTION BYPASSING FIRST PASS EFFECT

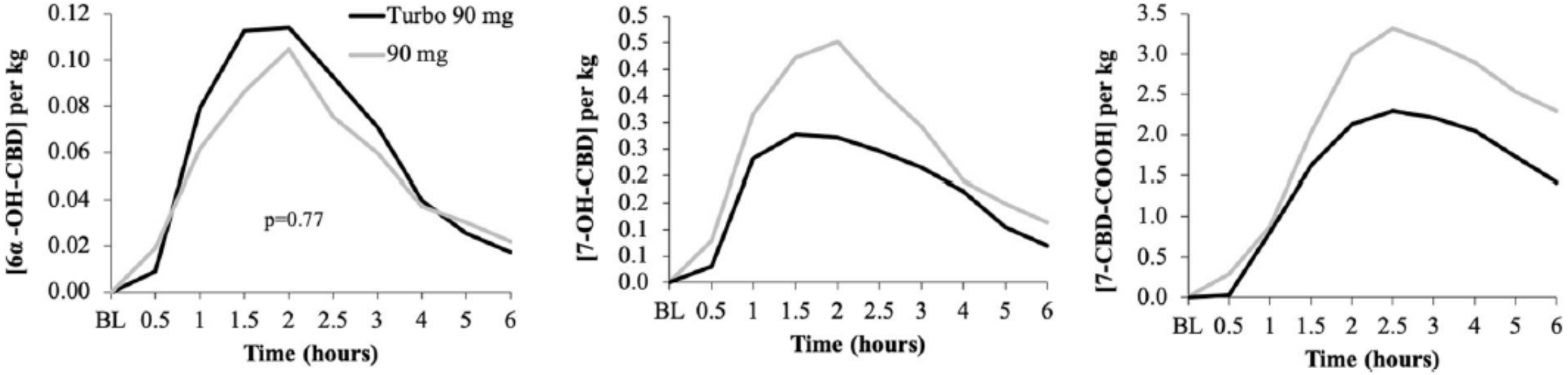


Fig. 7 Liver metabolites (left to right, 6α-OH-CBD, 7-OH-CBD and 7-CBD-COOH) following TurboCBD™ 90 mg or generic 90 mg doses. Linear mixed model with Bonferroni correction

2021 DEHYDRATECH CBD CLINICAL STUDY HYPER-H21-2

- **HYPER-H21-2** (September 2021) - Human clinical study (n=16) **using Enhanced "DehydraTECH-2.0" CBD formulation at 450 mg evidenced up to a remarkable 23% decrease in blood pressure with DehydraTECH-CBD relative to placebo;**

- At selected times during the 24-hour study, **volunteers with mild to moderate hypertension averaged as much as a 20 mmHg (i.e., 23%) decrease in blood pressure** relative to placebo.

Figures 1, 2, and 3 below: Changes in 24-hr ambulatory systolic pressure (ΔSBP), mean arterial pressure (ΔMAP) and diastolic pressure (ΔDBP) between placebo (blue) and DehydraTECH-CBD (purple). Data are grouped means (n=16) with linear regression denoted by the trend lines. Timing of the three administered doses of DehydraTECH-CBD (150 mg CBD x 3 dosing intervals) is indicated by the vertical arrows.

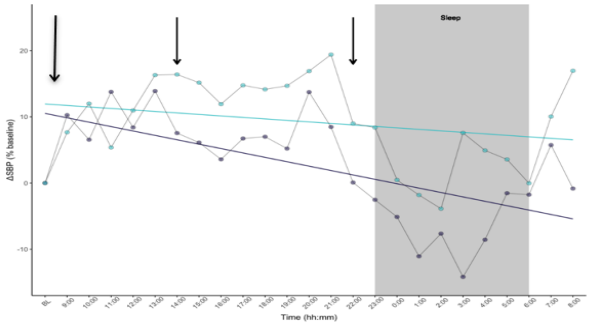


Fig 1

Volunteers averaged a **significant reduction of 7.0%** ($p < 0.001$) **in systolic pressure** with DehydraTECH-CBD relative to placebo

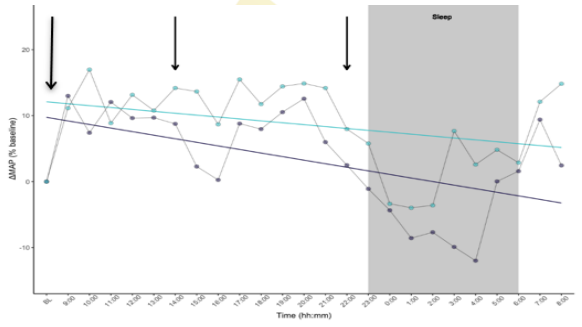


Fig 2

Volunteers averaged **a significant reduction of 5.3%** ($p < 0.001$) **in MAP** with DehydraTECH-CBD relative to placebo

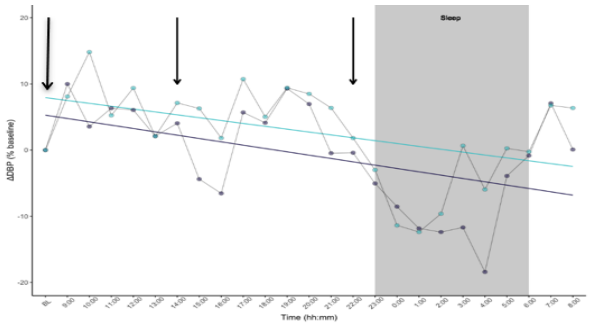


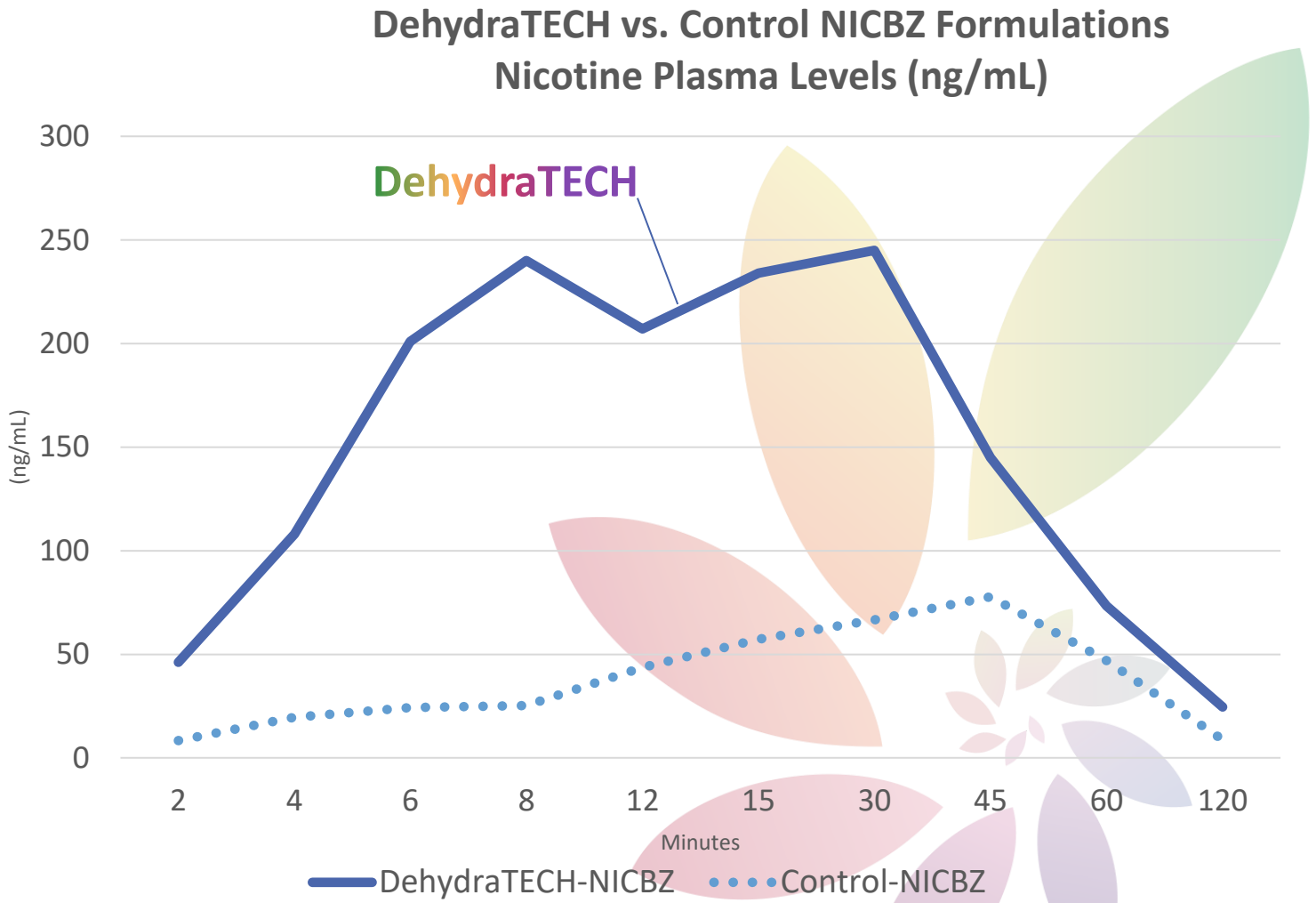
Fig 3

Volunteers averaged a **significant reduction of 3.5% in diastolic pressure** relative to an increase in diastolic pressure (-0.8 vs. +2.7; $p<0.001$) from baseline with DehydraTECH-CBD relative to placebo

CASE STUDY – ORAL NICOTINE

- 2021 study in male beagle dogs (n=40) (NIC-A21-1)
- DehydraTECH vs. positive control oral nicotine pouches
- Nicotine benzoate (NICBZ) and nicotine polacrilex tested
- **Comparable blood levels in 2-4 minutes as required 45 minutes with controls**
- **Up to 10-fold higher Cmax** (p = 0.004)

Nicotine Type	DehydraTECH Cmax* % Improvement (ng/mL)	Control (ng/mL)	DehydraTECH AUClast** % Improvement (hr·ng/mL)	Control (hr·ng/mL)
Nicotine Benzoate	367.3 ± 220.2 **263%** (p=0.002)	101.1 ± 39.0	227.6 ± 86.2 **169%** (p=0.0003)	84.7 ± 13.5
Nicotine Polacrilex	344.6 ± 286.7 **1052%** (p=0.004)	29.9 ± 15.8	179.3 ± 73.6 **664%** (p=0.00004)	23.5 ± 8.7



DehydraTECH nicotine benzoate pouches tested at 3.31 mg nicotine per pouch. DehydraTECH nicotine polacrilex pouches tested at 3.79 mg nicotine per pouch. Concentration-matched, non-DehydraTECH positive control pouches tested at 3.12 mg and 3.48 mg nicotine per pouch respectively. Cmax = peak plasma concentration. AUClast = area under the curve or total plasma quantity up to the last measurement time point.

BRAIN TISSUE NICOTINE LEVELS (RODENT STUDIES)

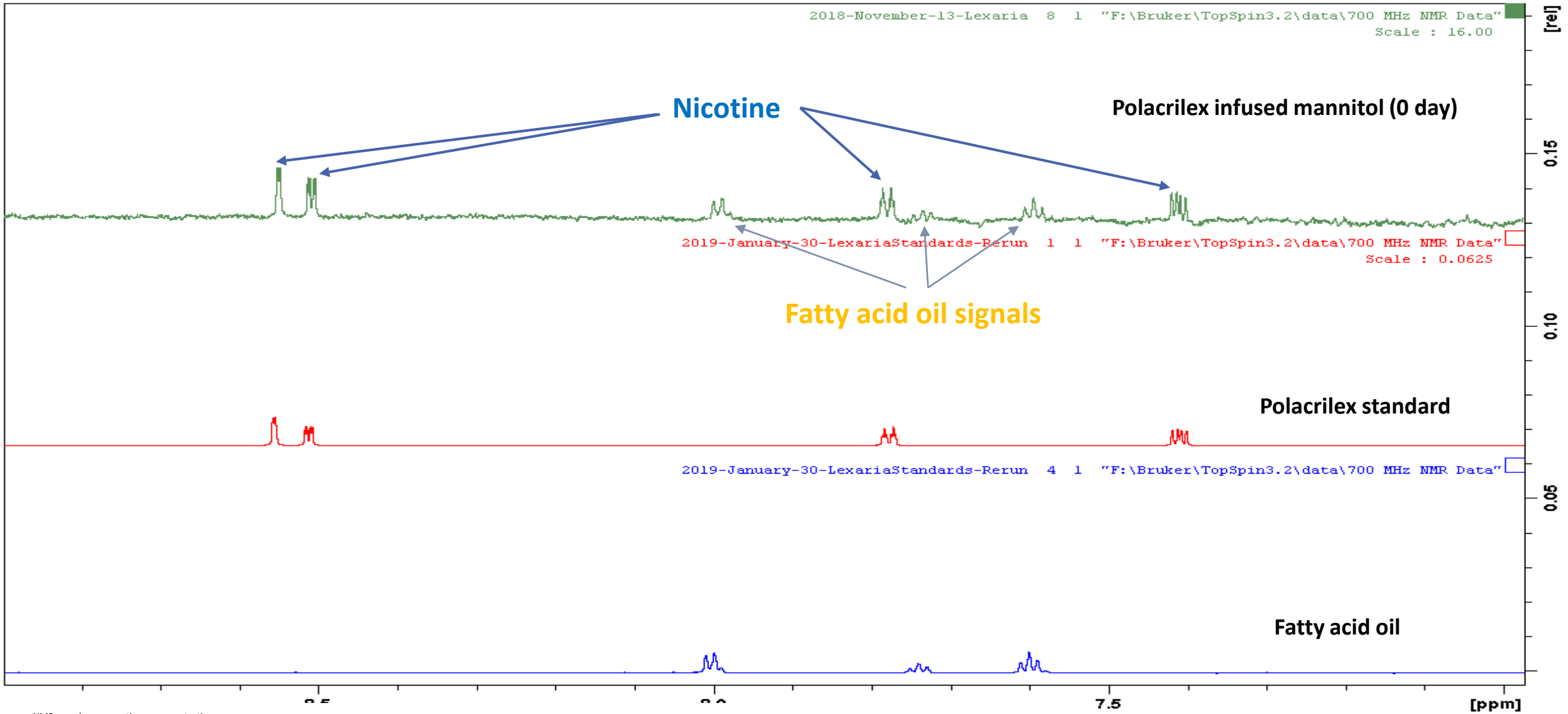
17LEXAP1 - Study of 12 lab rats with Brain Testing at 24 hours
(April 2018)

Test	Control Formulation (10 mg/Kg)	Lexaria Formulation (10 mg/Kg)	% Improvement
Maximum Brain Concentration (Cmax; ng/g)	51.8 ± 30.4	290 ± 197	560%

18LEXAP1 - Study of 40 lab rats with Brain Testing at 1, 4, 8 and 24 hours
(August 2018)

Test	Control Formulation (10 mg/Kg)	Lexaria Formulation (10 mg/Kg)	% Improvement
Maximum Brain Concentration (Cmax; ng/g)	427 ± 66.5	1,260 ± 200	295%
Time to Cmax	4 hours	1 hour	400%
Total Quantity in Brain Tissue (AUC; hr·ng/g)	5,881 ± 538	12,999 ± 1252	221%

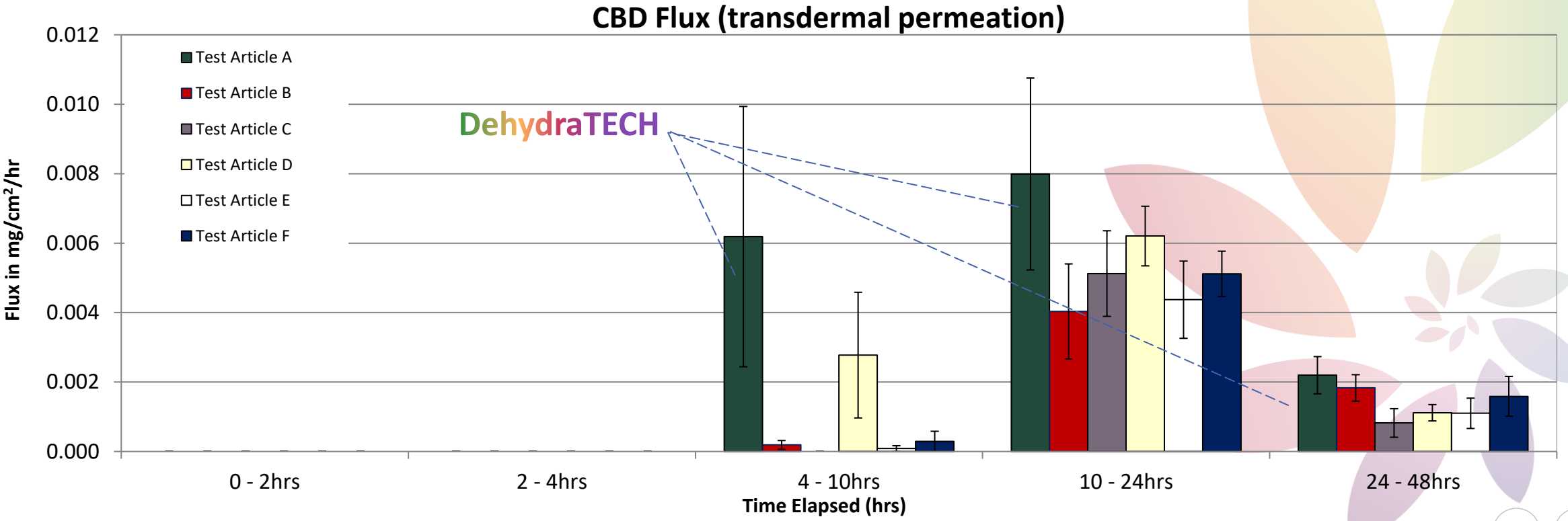
NMR TESTING – NO COVALENTLY BOUND NME FORMATION



NMR = nuclear magnetic resonance testing.
NME = New molecular entity

CASE STUDY – TRANSDERMAL CBD DELIVERY

- 2018 in vitro transdermal study using human cadaver skin
- DehydraTECH (“A”) vs. concentration-matched controls (“B” through “F”) with and without commercial penetration enhancers
- **Up to 1900% gains in transdermal permeability (CBD flux) in fastest measured interval**



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