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Lexaria BIOSCIENCE

INVESTOR PRESENTATION

Q3 2021

Lexaria Bioscience Corp.

NASDAQ:LEXX | NASDAQ:LEXXW

DRUG DELIVERY PLATFORM INNOVATOR

www.lexariabioscience.com

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INVESTMENT HIGHLIGHTS

- **21 patents granted** and **over 50 patent applications pending** around the world for **DehydraTECH** technology designed for fast acting, less expensive and more effective **oral drug delivery***.
- Disruptive **drug delivery technology** with multiple opportunities for success in **antivirals**, **nicotine**, **cannabinoids**, and other Active Pharmaceutical Ingredients ("**APIs**").
- Lexaria's wholly-owned **revenue generating** subsidiary Lexaria Hemp Corp. **generates revenues** from **DehydraTECH** CBD powders and has received verbal orders from existing licensees **to produce at least 56 million servings in 2021.**
- **Planned** pharmacokinetic ("PK") **studies** will evaluate **DehydraTECH's** ability to **improve quantity** of drug delivered and **speed** with which it is delivered including **CBD for hypertension, nicotine for reduced-risk smokeless tobacco** and/or **pharmaceutical products, antivirals for COVID-19** and other infectious diseases.
- **Up list** to **Nasdaq** Capital Markets and a **US$11 million financing completed** in January 2021.
- Additional **DehydraTECH** transactions **expected** through 2021.

FOCUSED ON COMMERCIALIZATION THROUGH PARTNERSHIPS AND LICENSING

*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.

ADDITIONAL 2021 DEHYDRATECH INVESTIGATIONS CUMULATIVE MARKET VALUE OVER $100 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**:

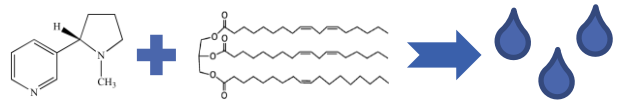
- **Oral Cannabinoids:** Estimated at **$18.4 billion** in 2021 and expected to reach **$46.2 billion** in 2025.(1)
- **Antivirals**: Estimated at **$52.1 billion** in 2021 and expected to grow to **$66.7 billion** by 2025.(2)
- **Oral Mucosal Nicotine:** Global smokeless tobacco products was a **$13.6 billion market** in 2018, forecast to grow at 7.2% per year until 2025.(3)
- **PDE5 Inhibitors**: Phosphodiesterase inhibitors with brand names such as Viagra represented a $**4.4 billion market** in 2014.(4)
- **Human Hormones**: Estrogen and Testosterone replacement therapies represent a **$21.9 billion market**.(5)
- **Ibuprofen and Naproxen:** Global NSAID sales were **$15.6 billion** in 2019 and projected **$24.4 billion by 2027**.(6)
- **Vitamin D3:** Global Vitamin D3 market size was **$1.1 billion** in 2021, growing at 7.0% per year and expected to reach **$1.7 billion** in 2026.(7)

* Details to be announced and subject to change and scheduling (1) https://www.thebusinessresearchcompany.com/report/cannabis-products-global-market-report (2) https://www.reportlinker.com/p06090622/Antivirals-Global-Market-Report-COVID-19-Implications-And-Growth-to.html?utm_source=GNW (3) https://www.grandviewresearch.com/industry-analysis/smokeless-tobacco-products-market (4) https://www.grandviewresearch.com/industry-analysis/erectile-dysfunction-drugs-market (5) https://www.grandviewresearch.com/industry-analysis/hormone-replacement-therapy-market (6) https://www.fortunebusinessinsights.com/non-steroidal-anti-inflammatory-drugs-nsaids-market-102823 (7) https://www.marketdataforecast.com/market-reports/vitamin-d-market

PATENTED DEHYDRATECH DRUG DELIVERY

✓ Speeds up onset ✓ Increases bioavailability ✓ Improves drug potency *

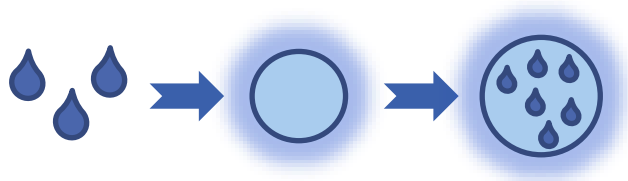
1 Combine Active Pharmaceutical Ingredient with Fatty Acid Oil



API

Fatty Acid
(e.g., LCFA)

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

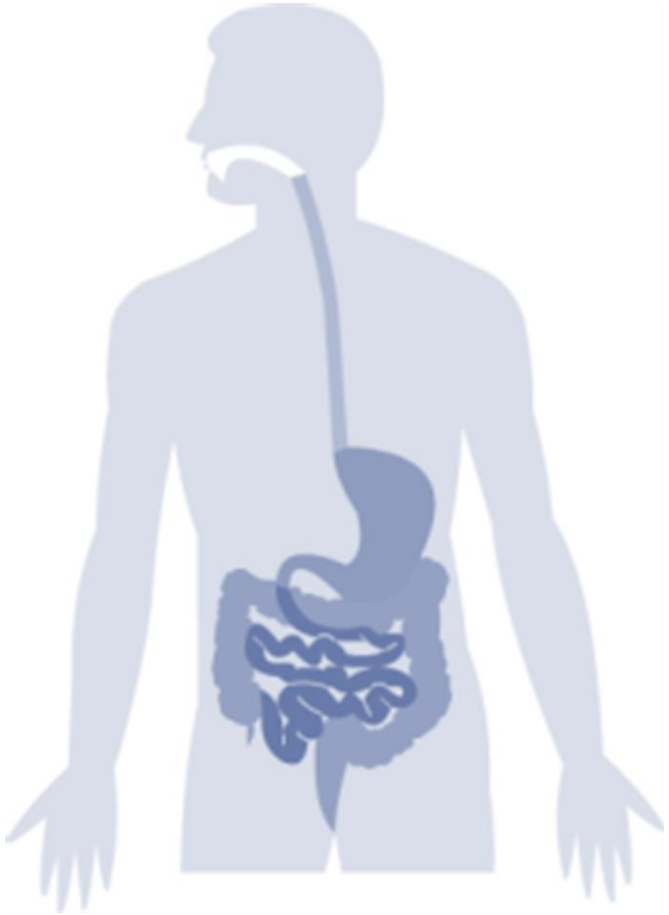
*Based on subjective and objective clinical testing in 82 human volunteers with CBD, THC and nicotine formulations, *in vivo* animal testing in 316 rodents with CBD and nicotine formulations and hundreds of thousands of commercial product servings of CBD and THC formulations by Lexaria's licensing partners.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

HOW DOES DEHYDRATECH WORK?

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

Lipids enable gastric protection and rapid passage(2)

Small intestine quickly absorbs LCFAs into lymphatics (bypassing first pass liver effect) and MCFAs via the liver(3)

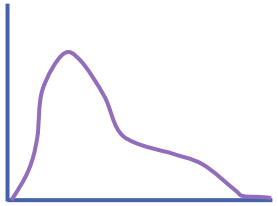


API = Active Pharmaceutical Ingredient
LCFA = Long Chain Fatty Acid
MCFA – Medium Chain Fatty Acid

- Close collaboration with largest R&D organization in Canada, the National Research Council, since January 2017
- Thoroughly evaluated through:
  - Nuclear Magnetic Resonance (NMR);
  - Fourier Transform Infrared Spectroscopy (FTIR);
  - Liquid Chromatography-High Resolution Mass Spectroscopy (LC-HRMS);
  - Dynamic Light Scattering (DLS); and Zeta Potential analysis
- NMR molecular characterization suggests **DehyrdraTECH does not change the chemical structure** of the API it delivers, allowing some reliance on original API safety characterization.
- DehydraTECH shown to **reduce particle size through a patented, novel method**(4)

(1) Coupland & Hayes (2014). Pharm Res. Nov 31(11); 2921-2939 (2) Soehngen et al., (1998). Arthritis & Rheumatism. Vol 31, No. 3.
(3) Iqbal & Hussain (2009). Am J Physicol Endocrinol Metab. Jun;296(6);E1184-94
(4) 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)	Animal testing suggests up to 19x improvement(4)	Higher ratio of drug delivery expected to lower overall drug costs

Patented drug delivery technology may improve 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) http://www.lexariabioscience.com/news/lexaria-bioscience-announces-new-dehydratech-innovation-files-new-patents/

2021 STUDY PROGRAM HIGHLIGHTS

2021 Hypertension Program: 5 Studies

3 Human and **2 Animal Studies** utilizing CBD to regulate blood pressure and blood flow.

HYPER-A21-1 Successful results from first Animal Study.

HYPER-A21-2 Successful results from second Animal Study.

HYPER-H21-1 Successful results from first Human (24-person) Clinical Study.

HYPER-H21-2 (16-person) Human clinical 150mg x 3 doses PK and sleep study; final results due in **September**.

HYPER-H21-3 (16-person) Human clinical 300mg Hypoxic Pulmonary Vasoconstriction study; timing of final results TBD once subject recruitment commences.

2021 Antiviral Program: 4 Studies

1 Cell based and **3 Animal Studies** utilizing Remdesivir and other antiviral drugs studying PK* and efficacy.

VIRAL-C21-3 Successful results from a cell-based study tested whether **DehydraTECH**-processed antiviral drugs including Remdesivir are able to inhibit SARS-CoV-2 live virus.

VIRAL-A20-2 Successful Animal Study results.

VIRAL-MC21-1 Successful Study results.

VIRAL-A20-3 Results due in **August**.

* Pharmacokinetic

DEHYDRATECH FOR CANNABINOIDS – FASTER AND MORE EFFECTIVE DELIVERY

METHODS OF CANNABINOID CONSUMPTION

1. Inhalation
- High bioavailability (~27%[1]), harmful to Lungs

2. Sub-lingual (under tongue)
- Medium bioavailability (~13%[2]), foul taste

3. Oral – Gastrointestinal Tract
- Low bioavailability (~6%[1]), sugar filled to mask taste

DehydraTECH (Oral Technology)

Transforms the way cannabinoids enter the bloodstream through the gastrointestinal tract

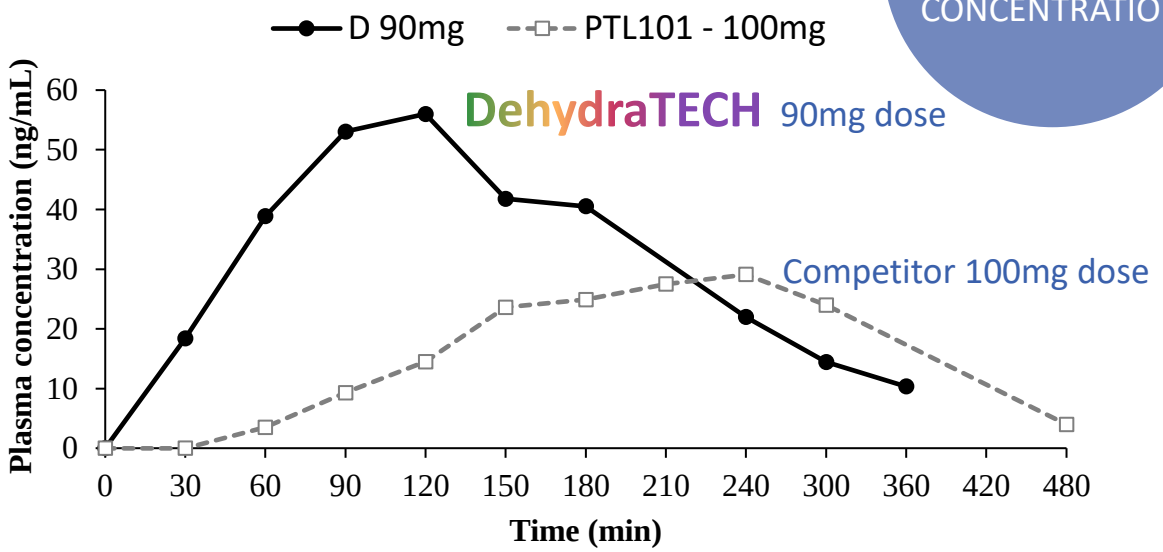
- **Fast Acting**
- **Improved Taste**
- **Increased Bioavailability**
- **Improved Blood Brain Barrier Penetration[3]**

[1]Clin Chem. 2011 Jan; 57(1): 66–75
[2]Clinical Pharmacology in Drug Development 2017, 00(0) 1–8
[3]Based upon preclinical studies in animals

CASE STUDY: TurboCBD™ - LEXARIA'S ORAL CBD PRODUCT

- 90mg DehydraTECH dose vs. Competitor 100mg dose
- **Competitor delivers virtually zero CBD at 30 minutes**
- **Lexaria quicker "on" and quicker "off"**

FASTER ONSET AND OFFSET; HIGHER PEAK CONCENTRATION



Pharmacokinetic comparison of the ingestion of DehydraTECH™ 90mg (solid black solid circles) and PhytoTech Therapeutics' PTL101-100mg gelatin matrix capsules (dashed grey open squares) [Atsmon et al., Clinical Pharmacology in Drug Development 2018, 7(7) 751–758].

DEHYDRATECH SCIENCE – CANNABIDIOL DELIVERY

- **HYPER-A21-1** (May 2021) - Rodent study completed (n=10) **demonstrating significant enhancement** in **CBD** delivery using **DehydraTECH**;
- **Three new DehydraTECH 2.0 formulations delivered improved performance** when compared to both Lexaria's original **DehydraTECH** 1.0 and 2.0 concentration-matched formulations, as well as to a medium chain triglyceride ("MCT") oil based control formulation representative of standard industry practices;
- **More research planned for 2021** that will evaluate impacts upon real-time blood pressure in animals using select formulations pursuant to these studies.

Formulation	AUClast (1) (hr·kg·ng /mL/mg)	% Improvement over MCT Formulation (p value)	% Improvement over original DehydraTECH 1.0 (p value)	% Improvement over original DehydraTECH 2.0 (p value)
MCT Control (2)	13.17 ± 6.78	--	--	--
Original (2) DehydraTECH 1.0	64.6 ± 23.7	390% (p=0.00002)	--	--
Original (3) DehydraTECH 2.0	134.7 ± 63.7	923% (p=0.00009)	108% (p=0.0036)	--
NEW DehydraTECH 2.0 Formulation 1 (4)	153.9 ± 62.8	1,068% (p=0.00003)	138% (p=0.0006)	14% (p=0.253)
NEW DehydraTECH 2.0 Formulation 2 (4)	216.0 ± 94.9	1,540% (p=0.00004)	234% (p=0.0003)	60% (p=0.018)
NEW DehydraTECH 2.0 Formulation 3 (4)	300.1 ± 126.6	2,178% (p=0.00007)	364% (p=0.0002)	123% (p=0.002)

(1) AUC: Area Under the Curve, or total CBD delivery into the rodent bloodstream
(2) 60-minute study duration
(3) 60-minute study duration evaluated in 2019
(4) 120-minute study duration evaluated in 2021

DEHYDRATECH SCIENCE – CANNABIDIOL DELIVERY

- **HYPER-A21-2** (May 2021) - Rodent study completed (n=10) **demonstrating strongest CBD absorption results ever recorded** using **DehydraTECH**;
- **Two new formulations delivered improved performance** when compared to both Lexaria's original **DehydraTECH** 1.0 and 2019 **DehydraTECH** 2.0 concentration-matched formulations, as well as to a medium chain triglyceride ("MCT") oil-based control formulation representative of standard industry practices;
- **More research planned for 2021** that will evaluate impacts upon real-time blood pressure using select formulations pursuant to these studies.

Formulation	AUClast [1] (hr·kg·ng /mL/mg)	% Improvement over MCT Formulation (p value)	% Improvement over original DehydraTECH 1.0 (p value)	% Improvement over original DehydraTECH 2.0 (p value)
MCT Control [2]	13.17 ± 6.78	--	--	--
Original [2] DehydraTECH 1.0	64.6 ± 23.7	390% (p=0.00002)	--	--
Original [3] DehydraTECH 2.0	134.7 ± 63.7	923% (p=0.00009)	108% (p=0.0036)	--
NEW DehydraTECH 2.0 Formulation 5 [4]	187 ± 95	1,322% (p=0.0001)	190% (p=0.001)	39% (p=0.08)
NEW DehydraTECH 2.0 Formulation 6 [4]	370 ± 172	2,708% (p=0.00005)	472% (p=0.0001)	174% (p=0.0008)

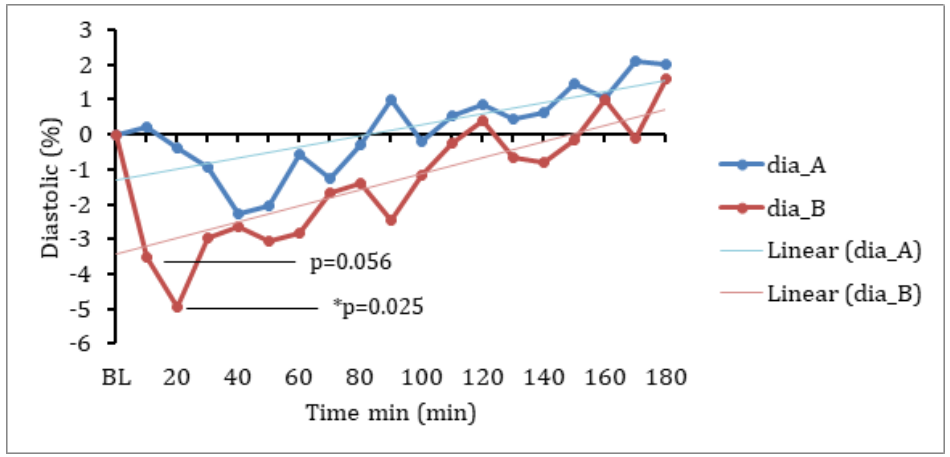
(1) AUC: Area Under the Curve, or total CBD delivery into the rodent bloodstream
(2) 60-minute study duration
(3) 60-minute study duration evaluated in 2019
(4) 120-minute study duration evaluated in 2021

DEHYDRATECH SCIENCE – CANNABIDIOL DELIVERY

- **HYPER-H21-1** (July 2021) - Human clinical study (n=24) **evidences a rapid and sustained drop in blood pressure with DehydraTECH-CBD and excellent tolerability**;

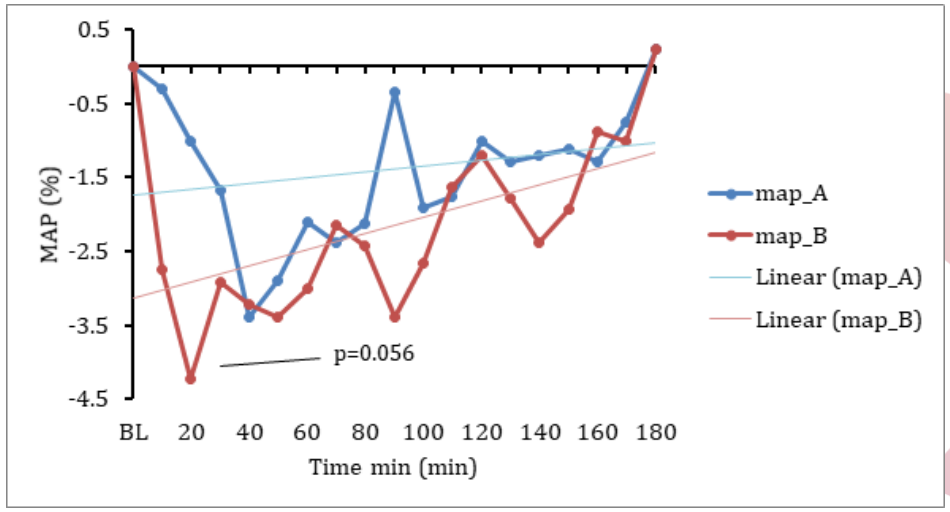
- **Blood Pressure was reduced** across both male and female volunteers **and was most pronounced with DehydraTECH-CBD in the first 10-50 minutes of the study,** reinforcing our pre-existing findings **demonstrating that DehydraTECH delivers superior performance over generic CBD controls;**

- **Lexaria looks forward to completing its ongoing additional sample and data analyses work for this study** and reporting upon those outcomes when complete.



There was also a tendency for a **greater reduction in relative diastolic pressure** from baseline with DehydraTECH-CBD than the concentration matched, generic CBD control.

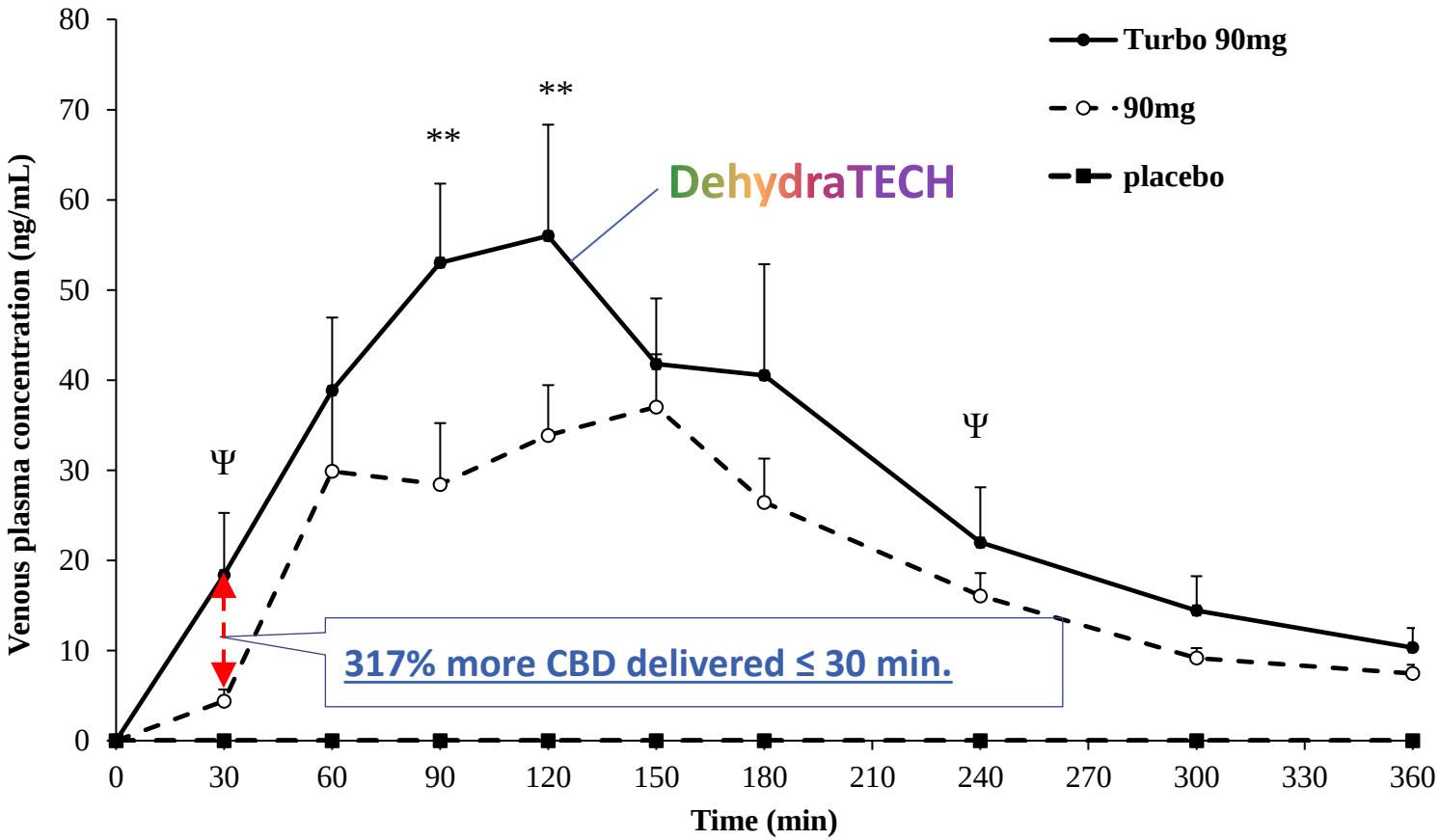
This was most notable in the initial 10-20 minute period post-dosing evidencing statistical significance at the 20-minute timepoint (p=0.025).



There was a tendency for **relative Mean Arterial Pressure ("MAP") to be reduced greater from baseline** with the DehydraTECH-CBD than the concentration matched, generic CBD control; again, **most notably in the initial 20 minutes post-dosing**.

CASE STUDY: LEXARIA'S TurboCBD™ - CLINICALLY DEMONSTRATED BLOOD AND BODY RESPONSE BENEFITS

- 2018 European human clinical study (n=12)
- Double-blind, 90 mg CBD dose
- **317% more CBD delivered** ≤ 30 min (only TurboCBD 90 > placebo; p<0.05)
- **Higher CBD delivery** throughout entire study
- **Lower** blood pressure shown vs. baseline ($p < 0.05$)
- **Higher** cerebral perfusion shown vs. baseline ($p < 0.001$)



Plasma cannabidiol (CBD) concentration in venous blood over 6 hours following consumption of generic 90mg (dashed black open circles) CBD doses compared to DehydraTECH™ 90mg (solid grey solid circles) CBD doses. Standard error included for clarity. **p<0.01 TurboCBD™ 90mg > all others; Ψp<0.05 only TurboCBD 90mg > placebo. Note both generic and DehydraTECH™ are otherwise significantly greater when compared to placebo.

DEHYDRATECH FOR ANTIVIRAL – FASTER AND MORE EFFECTIVE DELIVERY

- **DehydraTECH** is clinically demonstrated to significantly increase bioavailability for fat soluble drugs*
- Rodent PK study completed evidencing **significant enhancement in oral delivery of antiviral drugs**
- Objective is to increase drug delivery orally for **greater therapeutic response, tolerability and to lower cost of drugs**
- Research expected to lead to expanded safety and efficacy testing in **COVID-19** and other infectious disease animal models

Many oral antivirals are poorly absorbed fat soluble drugs which compromise potency and are exceptionally expensive – *limiting dosing capability*

*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

DEHYDRATECH SCIENCE – ORAL ANTIVIRAL DELIVERY

- December 2020: Rodent PK study completed (n=40) **demonstrating significant enhancement in antiviral drug delivery using DehydraTECH;**

- Two drugs studied (darunavir and efavirenz) from representative classes of antiviral compounds **under investigation today for SARS-CoV-2/COVID-19 therapy** (i.e., protease inhibitors and reverse transcriptase inhibitors), and in use for treatment of HIV/AIDS;

- **More research planned for 2021** to expand upon these findings with additional antiviral drugs that are being investigated specifically for SARS-CoV-2/COVID-19; HIV/AIDS, and other viral diseases.

Drug	Drug Class	AUClast* Delivery & Improvement (hr·ng/mL)	Control (hr·ng/mL)	AUC∞** Delivery & Improvement (hr·ng/mL)	Control (hr·ng/mL)
Darunavir	Protease Inhibitor	721 ± 332 **54%** (p=0.036)	469 ± 252	726 ± 211 **35%** (p=0.062)	536 ± 223
Efavirenz	Non-nucleoside Reverse Transcriptase Inhibitor	752 ± 203 **16%** (p=0.11)	650 ± 148	1072 ±40 **42%** (p=0.028)	757 ±103

*AUClast = Measured AUC over 24 hr study duration
**AUC∞ = Theoretical extrapolated maximum AUC beyond 24 hr study duration

DEHYDRATECH SCIENCE – ORAL ANTIVIRAL DELIVERY

- **VIRAL-C21-3*** (June 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**;

- This study used one of the most widely applied and informative predictive measures of **drug efficacy** to measure the half-maximal inhibitory concentration ("**IC50**") of the drugs when formulated with **DehydraTECH.** This was an **important step** towards **advancing to animal** and **ultimately human efficacy testing** for the purpose of using **DehydraTECH-processed drugs** to **treat COVID-19**;

- **Lexaria's antiviral study program** may also have **benefits beyond COVID-19**, including other viral disease indications where **improved oral delivery performance** is needed;

- Lexaria is **currently investigating** other **antiviral drugs** of interest against **SARS-CoV-2/COVID-19**. The Company will release **plans for future in vivo efficacy modelling** as they become available.

* The Company is not making any express or implied claims that it has the ability to eliminate, cure or contain the COVID-19 (or SARS-2 Coronavirus) at this time.

DEHYDRATECH SCIENCE – ORAL ANTIVIRAL DELIVERY

- **VIRAL-A20-2** (June 2021): **Positive results** from our tolerability and pharmacokinetic animal study **VIRAL-A20-2**, evaluating **DehydraTECH**-enabled **remdesivir** and **ebastine,** demonstrating a **three-fold increase** in **oral delivery**;

- These findings build upon our study VIRAL-C21-3 that remdesivir and ebastine processed with **DehydraTECH** were **effective** at **inhibiting** the **COVID-19/SARS-CoV-2 virus** using an in vitro screening assay in infected cells;

- **More research planned for 2021** to expand upon these findings with additional antiviral drugs that are being investigated specifically for SARS-CoV-2/COVID-19; HIV/AIDS, and other viral diseases.

Drug	Drug Class	Cmax** % Improvement (ng/mL)	Control (ng/mL)	AUClast*** % Improvement (hr·ng/mL)	Control (hr·ng/mL)
Remdesivir * (GS-441524)	Nucleotide Reverse Transcriptase Inhibitor	54.5 ± 69.4 **110%** (p=0.11)	26.4 ± 8.9	218.3 ± 244.5 **82%** (p=0.12)	119.7 ± 35.5
Ebastine	MPro Inhibitor (a.k.a. 3CL Protease Inhibitor)	9.1 ± 5.7 **33%** (p=0.17)	6.8 ± 4.4	29.9 ±28.0 **204%** (p=0.027)	9.8 ±9.7

* GS-441524 = Nucleoside analogue metabolite form
** Cmax = Maximum/Peak concentration
*** AUClast = Measured AUC over 48 hr study duration

DEHYDRATECH SCIENCE – ORAL ANTIVIRAL DELIVERY

- **VIRAL-A20-3** (July 2021): Rodent PK study completed (n=20) **demonstrating significant enhancement in antiviral drug delivery using DehydraTECH;**

- **DehydraTECH**-enabled colchicine, the latest of several drugs Lexaria has successfully tested with known **SARS-CoV-2/COVID-19** antiviral properties, **benefited** from our **proprietary formulation** and **processing**, resulting in **increased delivery**;

- **More research planned for 2021** to expand upon these findings with additional antiviral drugs that are being investigated specifically for SARS-CoV-2/COVID-19; HIV/AIDS, and other viral diseases.

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

** Cmax = Maximum/Peak concentration
*** AUClast = Measured AUC over 24 hr study duration

DEHYDRATECH FOR NICOTINE – FASTER AND MORE EFFECTIVE DELIVERY

An R&D program* was initiated to evaluate oral nicotine delivery performance. The primary results related to the early-stage DehydraTECH formulation were:

- **Demonstrated** acceptable chemical and microbiological stability
- **Tolerated** in a 7-day, repeat-dose acute toxicology study in rats with no test article-related effects on survival, macroscopic findings, or organ weights and no test article-related histopathological tissue findings
- **Created no issues** with throat burn and irritation in oral pouch and chew formats at standard commercial doses upon small scale sensory analysis in humans
- **Demonstrated** formation of a unique mixture of nanoparticles without formation of a covalently linked, new molecular entity construct upon molecular characterization by Canada's National Research Council (NRC); and is therefore not believed to be preclusive of Premarket Tobacco Product Application ("PMTA") applicability in this respect

* https://ir.lexariabioscience.com/news-events/press-releases/detail/102/lexaria-provides-update-on-ongoing-business-relationship

DEHYDRATECH SCIENCE – ORAL NICOTINE DELIVERY

April 2018; n=12 (in-vivo)	August 2018; n=40 (in-vivo)
• Blood sampling T=0, 15, 30, 45, 60, 120, 240 and 480 min • **48% improvement** in peak Cmax nicotine delivery to the bloodstream relative to controls • **1,160% faster delivery** of equivalent peak Cmax quantities of nicotine to the bloodstream than achieved with controls (within 15 min vs. 2.9 hours) • **560% higher** brain levels of nicotine where nicotine effects are focused, compared to controls	• Blood sampling T=0, 2, 4, 6, 8, 12, 15, 30, 45 and 60 min • **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

STRATEGIC LICENSING – ORAL NICOTINE DELIVERY

ALTRIA GROUP LICENSE

- **License** and **funding** to test ingestible/oral nicotine products
- **International licence rights**
- Undisclosed **royalty** on any oral nicotine product sales utilizing **DehydraTECH**

Research collaboration also in process with **British American Tobacco** and discussions underway with other Global-500 companies for **DehydraTECH** oral nicotine use

LEXARIA KEY EXECUTIVES, DIRECTORS, AND ADVISORS

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

CORPORATE AND FINANCIAL INFORMATION*

NASDAQ:LEXX | NASDAQ:LEXXW

Shares Outstanding	5.7 million
Fully Diluted	8.3 million
Share Price	US $6.41
Insider Ownership	10%(1)
Average Volume	1,375,330 (90-day to August 2)
Market Cap	US $36.7 million
Last Financing (January 2021)	US $11 million (@ US$5.25/unit)
Cash and Equivalents (March 31, 2021)	US $8.1 million

(1) Does not include derivative holdings
*as of 08/02/2021, source Nasdaq

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SCIENTIFIC APPENDIX

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SIGNIFICANT BP REDUCTION AND CEREBRAL PERFUSION

Middle- and posterior cerebral artery velocity and conductance at baseline and C_{max}

		Baseline	At C_{max}	p value
Generic 90 mg	MCAv (cm s^{-1})	67 ± 18	65 ± 15	0.71
	PCAv (cm s^{-1})	44 ± 6	45 ± 8	0.141
	MAP ($mmHg^{-1}$)	84 ± 8	82 ± 6	0.27
	MCAc (cm s^{-1} $mmHg^{-1}$)	0.81 ± 0.2	0.81 ± 0.18	0.963
	PCAc (cm s^{-1} $mmHg^{-1}$)	0.53 ± 0.09	0.55 ± 0.09	0.321
TurboCBD™ 90 mg	MCAv (cm s^{-1})	66 ± 23	68 ± 21	0.174
	PCAv (cm s^{-1})	48 ± 12	49 ± 9	0.289
	MAP ($mmHg^{-1}$)	85 ± 5	81 ± 6*	0.016
	MCAc (cm s^{-1} $mmHg^{-1}$)	0.78 ± 0.22	0.84 ± 0.23***	< 0.001
	PCAc (cm s^{-1} $mmHg^{-1}$)	0.57 ± 0.11	0.61 ± 0.09	0.153

Data presented as mean ± SD; $n = 9$. Cerebral blood velocity (v) and conductance (c) normalized to end-tidal CO_2. MCA, Middle cerebral artery; PCA, posterior cerebral artery. Paired t test. *$p < 0.05$, ***$p < 0.001$

EXAMPLE NICOTINE BLOOD ABSORPTION DATA

	DehydraTECH Formulation (ng/mL)	Control Formulation (ng/mL)	% Improvement	p Value
2 minutes	56.68	105.57	-46.32	0.260114297
4 minutes	124.55	74.63	66.88	0.171769198
6 minutes	124.04	92.12	34.64	0.241171951
8 minutes	230.02	119.22	92.94	0.102332181
10 minutes	254.64	133.89	90.19	0.043918813
12 minutes	278.99	147.94	88.58	0.029947174
15 minutes	307.68	150.09	105.00	0.006564706
30 minutes	303.13	148.68	103.88	0.002363596
45 minutes	300.43	155.54	93.15	0.003034948
60 minutes	394.23	220.16	79.07	0.025735488
Peak Nicotine Blood Level 0-60 min (ng/mL)	394.23	220.16	79.07	0.025735488
Total Nicotine Absorption (i.e., AUC) 0-60 min (hr·ng/mL)	266.48	136.75	94.87	0.008632357

NOTE: No AEs reported.
p Value < 0.05 signifies statistical significance

NICOTINE BRAIN TISSUE PK DATA HIGHLIGHTED

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

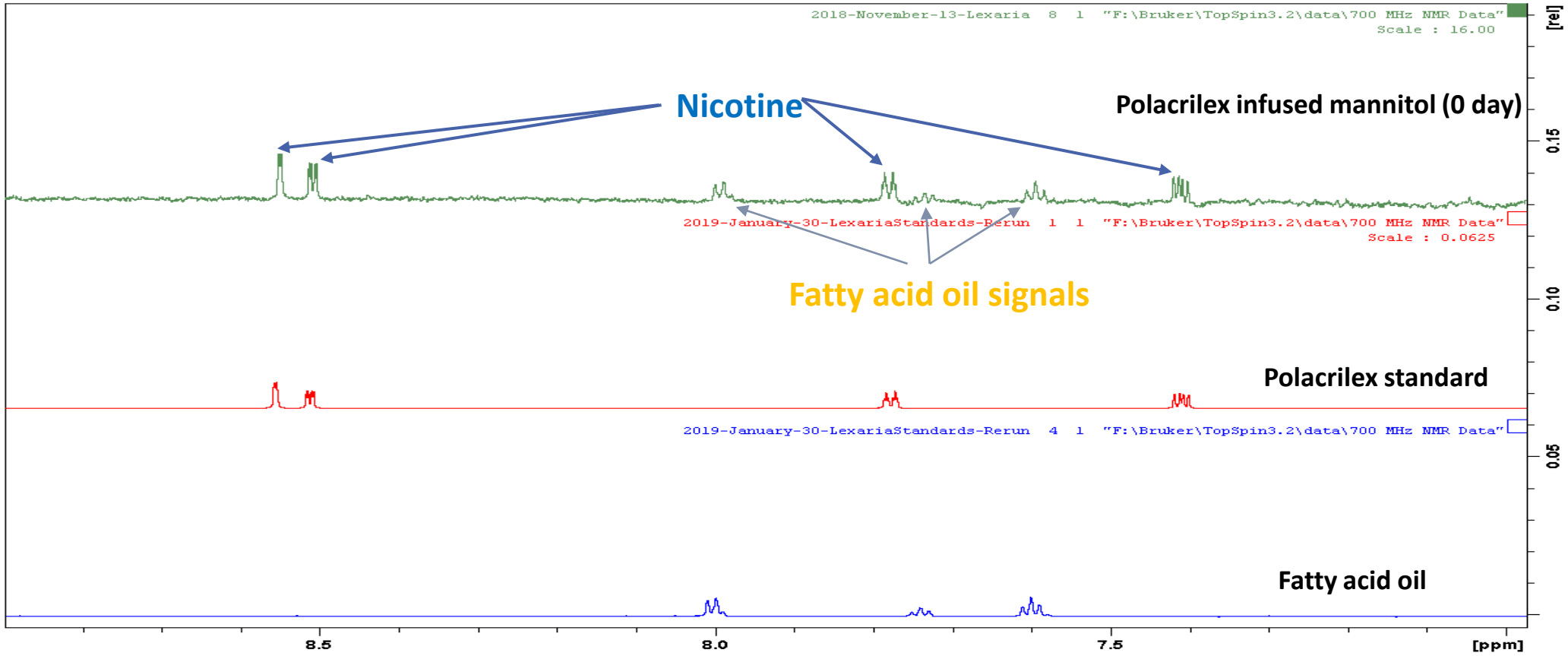
Test	Control Formulation (10 mg/Kg)	Lexaria Formulation (10 mg/Kg)	% Improvement
Maximum Brain Concentration (Cmax; ng/g)	51.8 ± 30.4	290 ± 197	560%

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%

NICOTINE NMR ANALYSES (T=0)

- No chemical shift apparent ruling out covalent bonded new chemical compound



2018 TurboCBD™ CLINICAL STUDY

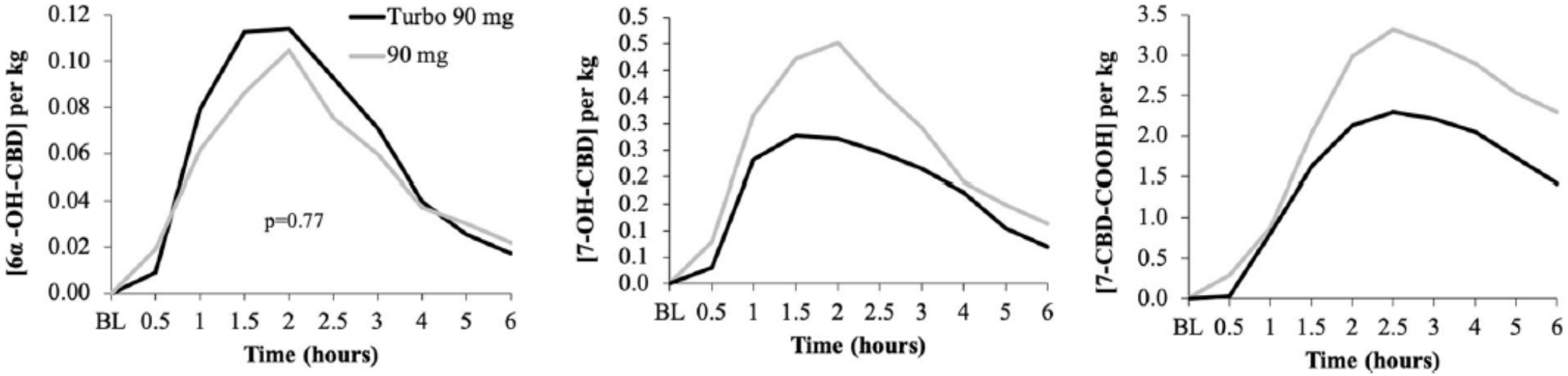
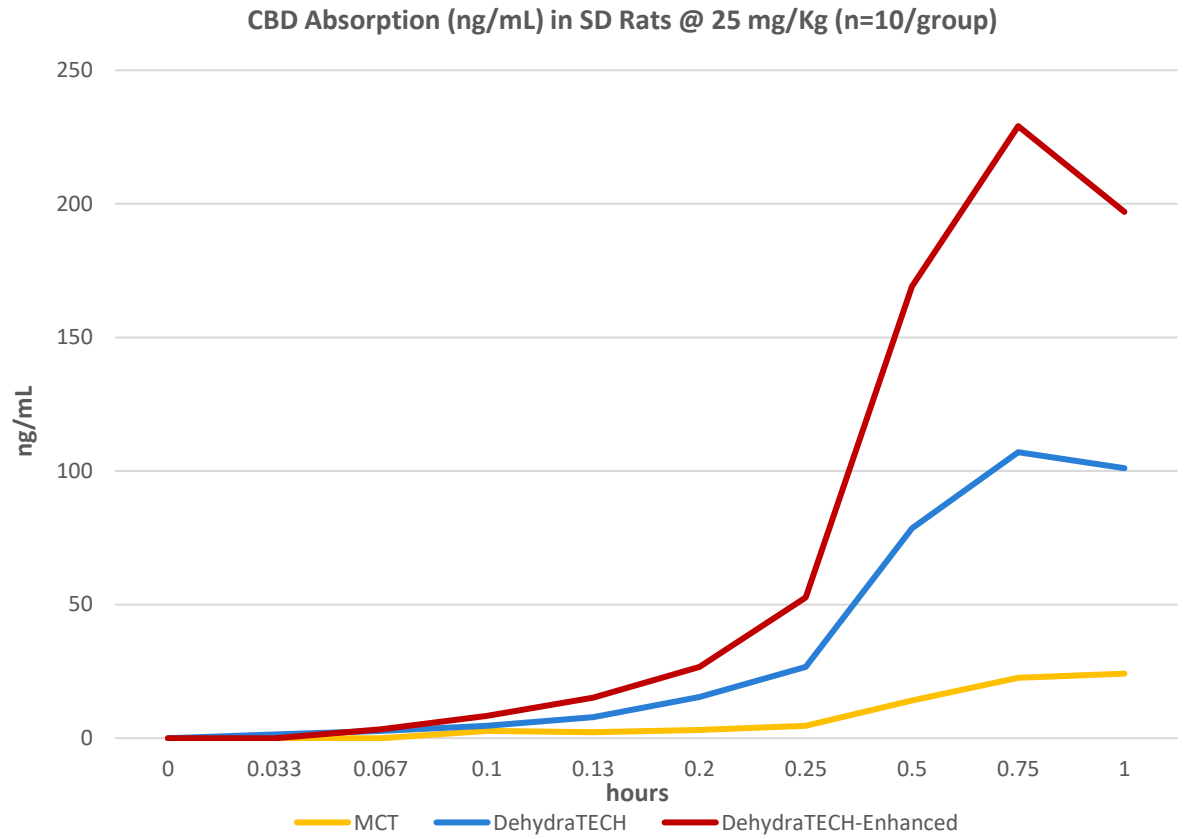


Fig. 7 Liver metabolites (left to right, 6α-OH-CBD, 7-OH-CBD and 7-CBD-COOH) following TurboCBD™ 90 mg or generic 90 mg doses. Linear mixed model with Bonferroni correction

DehydraTECH™ ENHANCEMENT UNDERWAY

19LEXAP1 (05/19) Design:

- DehydraTECH CBD (with & without an intestinal absorption "enhancement" ingredient incorporation) vs. MCT-based CBD positive control
- **Enhancement Ingredient is on FDA GRAS List**
- 25 mg/Kg (oral gavage)
- Standard DehydraTECH formulation: CBD + sunflower oil + infusion substrate
- Enhanced DehydraTECH formulation: CBD + sunflower oil + infusion substrate + "enhancement" ingredient
- MCT formulation: CBD + MCT oil + infusion substrate
- 30 male Sprague Dawley (SD) rats (3 groups of 10)
- Jugular vein cannulation for blood collection
- Blood sampling T=0, 2, 4, 6, 8, 10, 12, 15, 30, 45 and 60 min



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