White Paper by Lexaria Bioscience Corp.

"*DehydraTECH™ White Paper*"

Presented by:

Hill Avenue Cannabis is the exclusive worldwide owner of the rights to use DehydraTECH™ technology in the production and sale of THC products

To learn more, please visit our website at www.dehydratech-thc.com

To get in touch, please contact us at info@hillavecannabis.com

DehydraTECH™ White Paper

What is DehydraTECH™?

DehydraTECH™ is an elegant **Self Emulsifying Drug Deli very System** (SEDDS) developed and patented by Lexaria Bioscience Corp. ("**Lexaria**") and licensed exclusively to Hill Avenue Cannabis to produce THC products. It can be applied to cannabinoid molecules such as tetrahydrocannabinol ("**THC**") and cannabidiol ("**CBD**"), as well as many other bioactive substances. SEDDS technologies are used in high-end pharmaceutical biodelivery processes. They are a scientifically proven means of enhancing oral bioavailability of poorly soluble substances, and DehydraTECH™ is rapidly becoming the class leader for THC and CBD delivery.

DehydraTECH™ coats the THC molecule with a specific long chain fatty acid (LCFA) and through a precise dehydration process, combines it with a dissolvable powdered substrate such as dextrose, d-ribose, lactose, tapioca starch, gum arabic and a host of others. Topical applications use substrates such as glycerol monostearate, preventing phase separation of the THC oil during batch manufacturing.

The THC is temporarily "locked" within the substrate like a Trojan Horse, ideal for enabling rapid and more complete delivery into the human body upon dosing. In addition, because the fatty acids effectively mask the bitterness associated with plant derived THC extracts, DehydraTECH™ formulations optimize palatability and organoleptics across a wide range of oral dosage forms.

Why does DehydraTECH™ work best?

In the stomach, micelles enable efficient transportation of lipids, directing materials to be introduced to the body through various metabolic routes. These include chylomicra, lipoproteins formed in the small intestine to transport dietary fats through the lymphatic system to the bloodstream, away from first pass liver metabolism. Chylomicra avoid the liver and enter the bloodstream through the thoracic lymph duct. They carry complex lipids to directly to the lymphatic system, avoiding first pass liver metabolism.

The LCFA used to coat the THC in the DehydraTECH™ process is believed to mimic delivery through chylomicra, enhancing intestinal uptake of the THC and also directing it effectively to the lymphatic system, thereby avoiding first pass liver metabolism. This, in turn, results in more rapid and more complete delivery into the bloodstream following ingestion of DehydraTECH™- powered THC products.

DehydraTECH™ approaches solubility and absorption of THC through already-occurring physiological processes, not processes created for solutions in a factory or a bottle. DehydraTECH™ works with, not counter to, the body's eons-old systems of absorbing and processing nutrients.

The absorption of orally ingested cannabinoids, being hydrophobic and lipophilic, in the body is generally dependent on the amount of fat in the person's diet. The more dietary fat, the greater the chances for absorption beyond liver metabolism and degradation. The inverse is also true.

With traditional biodelivery technologies, including the new trend of nano-emulsification which generally uses a medium chain triglyceride ("MCT") oil as a transport method, first pass liver metabolism is unavoidable and diet-dependent: and dosing and absorption are inconsistent.

The patented DehydraTECH™ technology has been shown in independent clinical studies to effectively deliver orally ingested cannabinoids into the bloodstream more quickly and more completely, avoiding significant first pass liver elimination and degradation. Cannabinoid absorption by the body and its effectiveness using DehydraTECH™ is not dependent on the amount of fat in the diet.

Dosing is precise and consistent in each product serving because DehdyraTECH™ integrates the fatty acid chemistry required for enhanced delivery. As DehydraTECH™ is designed for human physiology, not dissolubility in solution outside the body, virtually all of the THC in a product enters the bloodstream and interacts with the body's endocannabinoid system.

DehydraTECH™ technology has also been clinically proven to enhance delivery of topically administered CBD. When formulated in creams or lotions, DehydraTECH™ permits CBD to pass into and through the skin more quickly and more completely because of the powerful emollient properties of its LCFA chemistry.

How does using DehydraTECH™ in my production affect my products?

DehydraTECH™ is flexible, elegant, and adaptable to virtually all major CPG form factors. DehydraTECH™ can be tailored to directly infuse tea leaves, functional food and beverage soluble substrates, common oral capsules, pills or tablets, gummies or other confections. Its applications are almost limitless because it can be applied to many common ingestible ingredients such as tapioca starch, maltodextrin, dextrose, pectin etc.

Product R&D and development for CPG product offerings using DehydraTECH™ can often be accomplished in under ninety days at minimal cost. And, whenever possible, DehydraTECH™ formulations are generally applied to a single ingredient already present in existing product formulas for easy integration with minimal disruption to existing manufacturing protocols.

As such, DehydraTECH™ formulations offer minimal disruption or changes to ingredient panels, INCI or manufacturing processes for existing formulations because the THC is combined with existing ingredients as appropriate. Typically, the only addition is the LCFA ingredient.

Is DehydraTECH™ proven?

DehydraTECH™ is backed by twenty-eight issued patents worldwide, with over fifty additional patents pending. DehydraTECH™ does not rely on anecdotal claims or marketing techniques; it is backed by solid clinical research and data. Human clinical trials and clinical data include research on hypertension reduction, blood-brain barrier penetration, absorption, rapidity of onset, tolerability, skin penetration, and many more. Ongoing studies by Lexaria are investigating effects on anti-inflammatory markers.

Summary

DehydraTECH™ is a biodelivery technology designed for the way human physiology works. We make cannabinoids – and the products that contain them – perform at the highest levels.

We are based in science, backed by studies, supported by data. We do not believe in anecdotes or marketing spin: we believe in performance.

Please visit Lexaria's website at https://lexariabioscience.com/research/ for research results.