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CANNABINOID CHRONICLES

Medical Cannabis News and Information

"Dr. Dave" Tours Canada to Educate Fellow Physicians About Cannabis

Dr. David Hepburn, aka "Dr. Dave", has spent the last one and a half years travelling around Canada with the goal of educating his fellow MDs about cannabis as a medicine. Speaking at conferences, sometimes sponsored by the commercial producers licensed by Health Canada, Dr. Hepburn runs through the history of cannabis prohibition and the research that has been done on the plant. He is trying to change the minds of a medical establishment loath to endorse a drug that has vast amounts of anecdotal evidence, but scant clinical trials, to support its use. He said cannabis can be a suitable medicine for patients suffering migraines, nerve-related pain, neurodegenerative conditions, such as MS, and symptoms such as insomnia or anxiety.

Initially Dr. Hepburn wanted nothing to do with cannabis but he helped a friend's mother apply to the federal medical cannabis program [MMAR] after he learned that cannabis was the only thing to help with both her pain and her chemo-related symptoms. He admits to changing his mind after exploring the subject, similar to US neurosurgeon Sanjay Gupte.

Dr. Hepburn agrees that the reticence his colleagues show regarding writing prescriptions for cannabis is "legitimate" based largely on lack of clinical research.

"There remains a lot of good studies to be done. But because it is safe and tolerable and we know it works for a lot of people for conditions in which the research is lacking, that doesn't mean we necessarily rob the person of the opportunity to use it now," he said.

While supportive of vaporization and oral ingestion, Dr. Hepburn believes that suppositories are the best way to deliver cannabinoids to the human body.

Source: www.theglobeandmail.com/news/british-columbia/on-a-mission-to-change-how-family-doctors-view-medical-marijuana/article25791287/

Cannabidiol (CBD) Misconceptions

Cannabidiol (CBD) has been popular in the news for the past few years since it was discovered that it is a cannabinoid that has no psychoactive effects on humans yet it has demonstrated therapeutic value. Research done by G.W. Pharmaceuticals suggests that CBD could be used for treating symptoms of rheumatoid arthritis and other autoimmune diseases, diabetes, nausea, bowel disorders, and many other hard-to-control side effects.

Apparently this has changed the perception of cannabis for many people, especially for medical purposes, and CBD has been touted as the next wonder drug. Fifteen US states have since developed CBD-only regulations requiring that medical cannabis, typically in an extract of some sort, has either very low or zero levels of THC. However, in the rush to develop cannabinoid-based medicines that don't make people high, the system may be missing the boat entirely with respect to the improved efficacy and reduced side effects of using not only multiple cannabinoids together and in different ratios but also the inclusion of flavonoids and terpenes; in other words, don't throw the whole-plant model out the window but embrace it instead.

The CBD misconceptions listed on page 3 have been adapted from an article by Project CBD (www.projectcbd.org/):

Continued page 3...

Human: Cannabis extract decreased spasticity in multiple sclerosis

In a clinical study with 44 patients with multiple sclerosis, of whom half received the cannabis extract Sativex and half a placebo, response on the modified Ashworth scale (at least 20 % improvement) was significantly more frequent after Sativex than placebo (50% vs 23.5 %). The Ashworth scale allows the objective measurement of spasticity intensity.

Source: http://www.ncbi.nlm.nih.gov/pubmed/26289497

Cells: How CBD may protect genes

In tests with THC, CBD (cannabidiol), and CBN (cannabinol), CBD increased most potently the activity of CYP1A1. This enzyme was shown to degrade the carcinogen benzo(a)pyrene. Previous research had shown that CYP1A1 may have a protective effect on genes which was attributed to the fact that CYP1A1 is highly active in the mucosa of the bowel, and thus inhibits infiltration of ingested benzo(a)pyrene carcinogen into the blood.

Source: http://www.ncbi.nlm.nih.gov/pubmed/26187180

Animal: Activation of CB1 receptor stimulated the formation of new nerve cells in the hippocampus

Mice, who received the anti-epileptic medication valproate, showed a small decrease of new born nerve cells in the hippocampus, a certain brain region. If they received this medication together with a synthetic cannabinoid (ACEA), which activates the CB1 receptor, the number of new-born nerve cells in this brain region was significantly increased.

Source: http://www.ncbi.nlm.nih.gov/pubmed/26225920

Human: Passive smoking of cannabis may result in positive blood tests for THC

In a study with 6 experienced cannabis users and 6 non-smokers extreme passive smoking resulted in positive tests for THC in oral fluid and blood up to 3 h following exposure. Authors concluded that "extreme second-hand cannabis smoke exposure mimicked, though to a lesser extent, active cannabis smoking."

Source: http://www.ncbi.nlm.nih.gov/pubmed/26139312

Cells: Cannabidiol (CBD) modulates the CB1 receptor

The non-psychotropic plant cannabinoid cannabidiol (CBD) is an allosteric modulator of the type 1 cannabinoid receptor (CB1 receptor). Allosteric regulation means that CBD binds to the CB1 receptor at a site other than the active site of the receptor. This is how CBD blocks THC effects, such as an increase in appetite or psychoactivity, at the CB1 receptor,.

Departments of Pharmacology, Dalhousie University, Halifax, Canada.

Source: http://www.ncbi.nlm.nih.gov/pubmed/26218440

Adolescent cannabis use not linked with later mental health problems according to long-term study

Chronic cannabis use by adolescent boys does not appear to be linked to later physical or mental health issues such as depression, psychotic symptoms or asthma, according to a study published by researchers from the University of Pittsburgh Medical Center in Pennsylvania and Rutgers University in New Jersey, USA. They tracked 408 males from adolescence until the age of 36 for the study, which was published in Psychology of Addictive Behaviors.

"What we found was a little surprising," said lead researcher Dr Jordan Bechtold, a psychology research fellow at the University of Pittsburgh Medical Center. "There were no differences in any of the mental or physical health outcomes that we measured regardless of the amount or frequency of marijuana used during adolescence." Based on some prior studies, they expected to find a link between teen marijuana use and the later development of psychotic symptoms (delusions, hallucinations, etc.), cancer, asthma or respiratory problems, but they found none. The study also found no link between cannabis use by adolescents and lifetime depression, anxiety, allergies, headaches or high blood pressure. The research was an offshoot of the Pittsburgh Youth Study, which began tracking 14-year-old male Pittsburgh public school students in the late 1980s to analyse various health and social issues. For 12 years, participants were surveyed annually or semi-annually, and a follow-up survey was conducted with 408 participants in 2009-10 when they were 36 years old.

Source: http://www.ncbi.nlm.nih.gov/pubmed/26237286

Animal: Endocannabinoids prevented cognitive deficits caused by morphine

In a study with rats a synthetic inhibitor of FAAH (fatty acid amide hydrolase), which causes an increase of endocannabinoid levels and thus an increased activity of endocannabinoids, protected against tolerance and memory deficits in chronic usage of morphine.

Source: http://www.ncbi.nlm.nih.gov/pubmed/26274041

Animal: Cannabinoids reduce hyperexitability in nerve cells of the brain

Researchers evaluated the antiepileptic effects of a synthetic cannabinoid (WIN 55,212-2) in rats and found that it decreased neuronal hyperexcitability. This research added to the evidence of "neuroprotective properties of cannabinoids, with a view" to better understand antiepileptic therapy.

Source: http://www.ncbi.nlm.nih.gov/pubmed/26135674

Cannabidiol (CBD) Misconceptions cont'd

...Continued from page 1

1. **CBD is medical. THC is recreational.**

Both cannabinoids have proven therapeutic value in natural or synthetic forms. Although maligned as brain-damaging, THC, on the contrary, is a neuroprotectant that protects brain cells, and can also promote new brain cell growth. And while single-molecule synthetic versions of THC and a whole-plant THC/CBD extract are prescribed by doctors and are recognized as having therapeutic value, THC found in the plant is viewed differently by some and treated as non-medical, or recreational, only.

2. **THC is the bad cannabinoid. CBD is the good cannabinoid.**

Again, both cannabinoids have therapeutic value. To isolate one as bad and one as good is like comparing apples and oranges. It is suggested that diehard cannabis prohibitionists are exploiting the good news about CBD to further stigmatize high-THC cannabis, casting the latter as the bad cannabinoid. Is this 'reefer madness' overreaction because THC might get you "high"?

3. **CBD is most effective without THC**

THC and CBD work better together. British researchers have shown that CBD increases the effect of THC's anti-inflammatory properties in an animal model of colitis. Scientists at the California Pacific Medical Center in San Francisco determined that a combination of CBD and THC has a more potent anti-tumoral effect than either compound alone when tested on brain cancer and breast cancer cell lines. And extensive clinical research has demonstrated that CBD combined with THC is more beneficial for neuropathic pain than either compound as a single molecule.

4. **Single-molecule pharmaceuticals are superior to 'crude' whole plant products**

Research has shown that there are fewer side effects and better efficacy with whole-plant products because the various cannabinoids, terpenes and flavonoids work together such that the therapeutic impact of the whole plant is greater than the sum of its single-molecule parts. This is known as the "entourage effect". See *Cannabinoid Chronicles*, Volume 7, Issue 3, April 2015 for an article on whole-plant CBD extract vs. synthetic CBD.

5. **Psychoactivity is inherently an adverse side effect**

Any "high" is seen as unbeneficial; it's not obvious, though, why mild euphoric feelings are intrinsically negative for a sick person, or a healthy person for that matter. The euphoric qualities of cannabis, far from being an unwholesome side effect, may be an integral part of the healing process.

6. **CBD is legal in all 50 US states**

Federal law prohibits US farmers from growing hemp as a commercial crop, but the sale of imported, low-THC, industrial hemp products is permitted in the US as long as these products are derived from the seed or stalk of the plant, not from the leaves and flowers. The catch: cannabidiol can't be pressed or extracted from hempseed. CBD can be extracted from the flower, leaves, and, only to a very minor extent, from the stalk of the hemp plant.

7. **'CBD-only' laws adequately serve the patient population**

Fifteen US states have passed "CBD only" (aka "low-THC") laws and other states are poised to follow suit. Some states restrict the sources of CBD-rich products and specify the diseases for which CBD can be accessed; others do not. Ostensibly these laws allow the use of CBD-infused oil derived from hemp or cannabis that measures <0.3% THC. But a CBD-rich remedy with little THC doesn't work for everyone. For some epileptics, THC-dominant strains are more effective than CBD-rich products. The vast majority of patients are not well served by CBD-only laws.

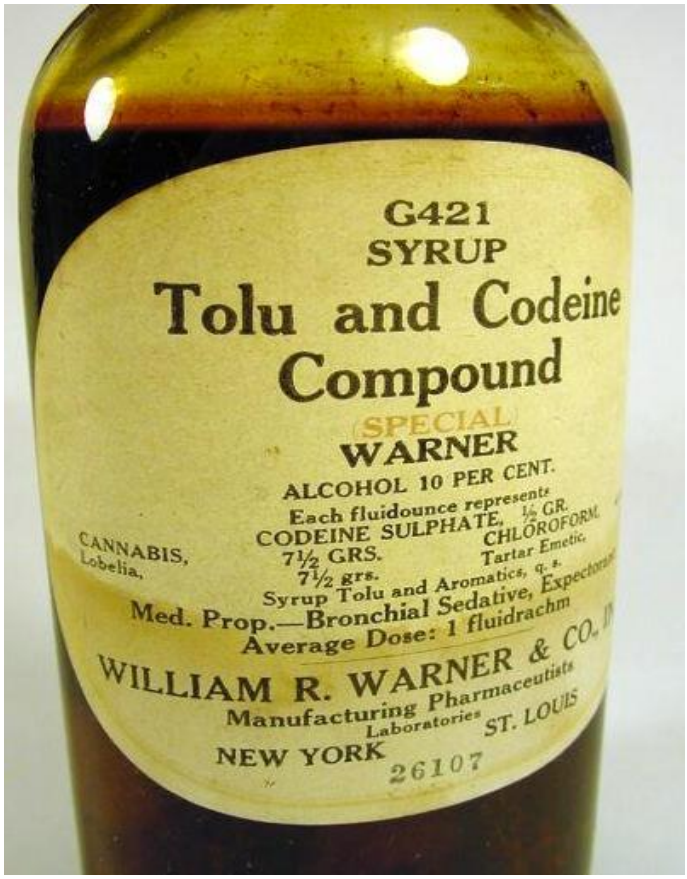
8. **CBD is CBD--it doesn't matter where it comes from**

The flower-tops and leaves of some industrial hemp strains may be a viable source of CBD (legal issues notwithstanding), but hemp is by no means an optimal source of cannabidiol. Industrial hemp typically contains far less cannabidiol than CBD-rich cannabis. Single-molecule CBD synthesized in a lab or extracted and refined from industrial hemp lacks critical medicinal terpenes and secondary cannabinoids found in cannabis strains. Again, these compounds interact with CBD and THC to enhance their therapeutic benefits.

Source: http://www.projectcbd.org/content/cbd-misconceptions

Image: http://cdn8.theweedblog.com/wp-content/uploads//marijuana-science.jpg

Visit our website at www.thevics.com



Federal Court Certifies Class-Action Suit By Licensed Cannabis Users

About 20,000 licensed cannabis users in B.C. are now part of a class-action lawsuit certified this week by the Federal Court of Canada after their names were printed on envelopes referencing medical cannabis. Their lawyers allege this was a significant breach of their privacy.

Some people have even lost their jobs because of the disclosure, said David Fraser, a privacy lawyer with McInnes Cooper. In total, over 40,000 people were affected and more than half reside in B.C., he said.

The letters were sent out in November 2013 by Health Canada to inform licensed users of changes to the program.

The trial is expected to start in a few years. For more information visit: **http://www.marijuanaclassaction.com/**

Source: http://vancouver.24hrs.ca/2015/07/29/bc-pot-users-certified-in-class-action-suit

Study Supports Efficacy of Inhaled Cannabis on Diabetic Neuropathy

A study published in July 2015 in *The Journal of Pain* concluded that inhaled cannabis "demonstrated a dose-dependent reduction in diabetic peripheral neuropathy pain". The short term trial, a randomized, double-blind, placebo controlled crossover study conducted on 16 patients, was conducted to assess the short-term efficacy and tolerability of inhaled cannabis.

In separate testing sessions, human participants were administered a placebo and 3 different doses of THC (low=1%, medium=4%, high=7%). At each increasing dose, there was a more significant reduction in spontaneous pain (i.e. the response was "dose-dependent"). At the highest dose, there was a reduction in the level of induced pain, but decreased performance on 2 out of 3 psychological tests.

Source: http://www.ncbi.nlm.nih.gov/pubmed/25843054

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Health Canada
http://www.hc-sc.gc.ca/dhp-mps/marihuana/index-eng.php

Drug Policy Alliance
www.drugpolicy.org

Media Awareness Project
www.mapinc.org

Together Against Poverty Society
302-895 Fort Street, Victoria
250-361-3521

"Because to take away a man's freedom of choice, even his freedom to make the wrong choice, is to manipulate him as though he were a puppet and not a person.

-- Madeleine L'Engle, author (1918 - 2007)