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CANNABINOID CHRONICLES

Medical Cannabis News and Information

More Whole-Plant Cannabis Trials on Humans Are Needed

For those who have followed the rise in awareness and knowledge of how cannabis can be utilized for medical purposes, this newsletter has tried to provide readers with some of the latest research developments. Indeed, the goal is not only to educate and enlighten persons using cannabis as medicine but also to inform physicians, nurses, and those in the health care profession that cannabis DOES have medical value (sorry Rona Ambrose, but you are seriously misinformed). As a side issue, the newsletter also hopes to pique the interest of anyone wishing to learn about this complex plant from a health perspective.

Access to medical cannabis research has become easier with the Internet, and the evidence suggests that there is not only a growing number of studies being done but also that the majority have discovered a benefit of some kind and/or uncovered yet another unique characteristic of cannabis. It has taken a long time, largely due to prohibition, to dispel the myths about cannabis; but, lo and behold, cannabinoids and other chemicals such as flavonoids and terpenoids, are intertwined with the human endocannabinoid system that primarily helps to maintain organism homeostasis. From reducing nausea to treating insomnia to shrinking glioma cells, cannabis has a role to play in human health.

So far research suggests that it may provide curative properties for cancer. And if it cannot cure, it can alleviate numerous symptoms in a safer fashion with much fewer side effects and chance of addiction. Overdosing on cannabis alone (typically via oral ingestion) isn't fun, but nobody has died as a result. Yet, as remarkable as the plant's chemical properties are, cannabis is not a panacea.

There are gaps in cannabis research. For example, a lot

of studies are usually performed on mice in a lab. Human studies pose ethical challenges, especially with children (e.g. treating epilepsy with cannabidiol). In addition, synthesized chemicals tested in isolation may not tell the complete story (this may not be the researchers oversight as opposed to access to legal plant cannabinoids).

Dr. Ethan Russo and others have confirmed the "entourage effect" that basically states that whole-plant cannabis products work synergistically to provide better efficacy and fewer side effects than synthesized forms.

A web-based organization, ProCon.org, searched for peer-reviewed studies around the world that used whole-plant cannabis products, including Sativex and Epidiolex, between 1990 and 2014. Though not an exhaustive search, they found 60 studies of which 41 found a benefit of some sort, 6 did not find a benefit, and 13 had mixed results; 27 studies were double-blind.

Considering the conditions that may benefit from cannabis, this number of studies is too low. We need to push for a lot more double-blind, large-population, and long-duration human trials.

We are finally pulling our collective heads out of the sand and have noticed, largely anecdotally, that cannabis helps with Fred's arthritis and Martha's IBS. Further research can help to quantify not only how cannabis can help treat disease and associated symptoms but also what forms are best suited for a particular situation and what is the correct dose depending upon the patient and form of ingestion.

To that end, it is encouraging to hear of the upcoming UBC Okanagan and Tilray, Nanaimo, study on the therapeutic benefits of whole-plant cannabis to treat PTSD, and a 10-year study in Quebec that will use a database to track the long-term effects of medical cannabis (see article pg. 3). Let science be the guide.

Source: <http://medicalmarijuana.procon.org/view.resource.php?resourceID=000884>

International Association for Cannabinoid Medicines (IACM) Bulletin

Psychotic experiences and cannabis use in adolescents are based on common risk factors

Cannabis use by adolescents does not cause psychotic experiences. Instead, cannabis use and psychotic experience co-occur due to environmental factors. This is the result of research by scientists of the University of London, King's College London and other British institutions published in the journal *Psychiatry Research*. Psychotic experiences were measured in 4830 twin pairs 16 years of age using self-reports and parent-reports.

Cannabis use was significantly correlated with psychotic experiences. Heritability (37%), common environmental influences (55%) and individual environment (8%) were found for cannabis use. For different psychotic experiences, heritability (27-54%), individual environmental influences (12-50%) and common environmental influences (11-42%) were reported as causes. Environmental influences explained all of the correlation between cannabis use and paranoia, cognitive disorganization and negative symptoms (e.g. depression) reported by parents, whilst the relationship between cannabis use and hallucinations indicated familial influences. Authors concluded that "focus on specific environments may reveal why adolescent cannabis use and psychotic experiences tend to travel together."

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25912376>

Increased intake of omega-3 fatty acids changes endocannabinoid concentrations and reduces headache

A study with 55 chronic headache patients demonstrated that changes in diet (increase of omega-3 fatty acids) can alter endocannabinoids derived from omega-3 and omega-6 fatty acids, and that these changes are related to reductions in headache pain and psychological distress.

Authors concluded that "These findings suggest that dietary interventions could provide an effective, complementary approach for managing chronic pain and related conditions."

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25958314>

The anti-epileptic effects of pregabalin may be increased by cannabinoids

In a mouse model of epilepsy the combination of the anti-epileptic drug pregabalin together with a synthetic CB-1 receptor agonist (ACEA) was more effective than one of the two alone.

Authors concluded that this "can be of pivotal importance for epileptic patients as a potentially advantageous combination if the results from this study translate into clinical settings."

Source: www.ncbi.nlm.nih.gov/pubmed/25904357

Children with epilepsy may profit from a treatment with CBD according to a survey

According to a survey with 117 children with epilepsy 85% of their parents reported a reduction in seizure frequency, and 14% reported complete seizure freedom. These results by researchers of David Geffen School of Medicine in Los Angeles were published in the journal *Epilepsy & Behavior*. They conducted a brief online survey of parents who administered CBD-enriched cannabis preparations for the treatment of their children's epilepsy. Survey respondents included 53 parents of children with infantile spasms and/or Lennox-Gastaut syndrome.

Perceived efficacy and tolerability were similar across etiologic subgroups. Epilepsy was characterized as highly refractory to standard treatment with median latency from epilepsy onset to CBD initiation of five years, during which the patient's seizures failed to improve after a median of eight anti-epileptic medication trials. The median duration and the median dosage of CBD exposure were 6.8 months and 4.3 mg/kg/day, respectively. Reported side effects were far less common during CBD treatment, with the exception of increased appetite (30%). A high proportion of respondents reported improvement in sleep (53%), alertness (71%), and mood (63%) during CBD therapy.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25935511>

CBD induces programmed cell death in brain tumour by activation of vanilloid receptors

Cell experiments support a novel mechanism by which CBD induces vanilloid receptor type 2 (TRPV2) dependent autophagy (cell degradation) in glioma cells, a certain form of brain cancer cells.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25903924>

THC inhibits tumour growth in skin cancer (melanoma)

In mice THC significantly inhibited tumour growth of transplanted melanomas, and this effect was mediated by cannabinoid receptors. Authors wrote that these "results confirm the value of exogenous cannabinoids for the treatment of melanoma."

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25921771>

THC enhances responses of immune system against HIV

Studies with mice demonstrate that under certain conditions, THC enhances HIV antigen-specific immune responses, which was mediated by several mechanisms, which were dependent and independent from CB1 and CB2 receptors.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25900076>

For more info visit: www.cannabis-med.org/

Quebec Medical Cannabis Registry

The Research Institute of the McGill University Health Centre (RI-MUHC) and the Canadian Consortium for the Investigation of Cannabinoids (CCIC) have launched a registry for users of medical cannabis in Quebec that will allow physicians to better manage its use and monitor patient safety.

This innovative project represents the world's first research database on the use of cannabis for medical purposes and places the province at the forefront of research in the field of medical cannabis. The registry was launched in response to a call by the Collège des médecins du Québec (CMQ) for guidelines on the use of medical cannabis in accordance with new government regulations. As of April 1, 2014, cannabis can only be prescribed "within a research framework," as it is not a medically recognized treatment.

"This registry has been developed to address the lack of research data on the safety and efficacy of cannabis," states principal investigator Dr. Mark Ware, Director of Clinical Research of the Alan Edwards Pain Management Unit at the MUHC and associate professor in Family Medicine and Anesthesia at McGill University. "We need this database to help develop and answer future questions on the medical use of cannabis, such as who uses it, for what reasons, through which methods, and at what dose."

"We need to improve our understanding of the real-world use of medical cannabis and to make these data available to other researchers and collaborators," explains Dr. Ware. "This is the first registry of cannabis users that has been designed to stimulate research and to broaden our knowledge of this field. The registry will eventually help us better understand the possible risks and benefits related to the use of this product."

Over the long term, this ten-year project will result in a research database that will be made available to the international scientific community.

Sources: <http://www.ccic.net/index.php?id=310,0,0,1,0,0>
<https://registrecannabisquebec.com/en>



Vancouver and Victoria Plan to Regulate Medical Cannabis Dispensaries

The City of Vancouver and the City of Victoria are poised to begin a very interesting experiment in Canadian public policy regarding an illegal product: the regulation of medical cannabis dispensaries and the cannabis-based products that they distribute.

Both cities have seen a dramatic rise in storefront operations that are, or claim to be, medical cannabis dispensaries. Access to the dispensaries covers a wide spectrum, varying from a physician's recommendation/prescription to walking in with a cast on, and many shades in between. Presently, legal medical cannabis is sold only through the mail from an Authorized Licensed Producer licensed by Health Canada.

In late April 2015, the City of Vancouver stated that it needed to rein in the storefront operations and is proposing regulation via a special business license costing \$5,000/yr., an annual permit fee of \$30,000, and restricting locations based upon proximity to a school, community centre, or other dispensary.

Vancouver's proposal, which will be discussed at a public town hall meeting on June 10, brought a quick negative response from the federal government. Vancouver Mayor Gregor Robertson rejected the response stating: "The city's approach right now is a common-sense one to deal with regulating the proliferation – we have over 80 of these dispensaries and they exist because of the federal landscape and the actions taken or not taken by the federal government."

Dr. Perry Kendall, B.C.'s provincial health officer, said Vancouver is taking "sensible" measures under the circumstances.

The City of Victoria followed a few weeks later by also stating a desire to regulate dispensaries, not close them. Mayor Lisa Helps said she supports the regulatory approach for several reasons: police are not opposed to the approach; it offers better control over access for minors; and lessons can be learned from the Vancouver model. Ms. Helps also suggested that a provision can be made for non-profits that have been providing medical marijuana for years to continue doing so.

Victoria Councillor Marianne Alto said she didn't want to interfere with the operations of compassion clubs, which have been operating successfully for years. "At no time, in no way, do I wish us to have a negative impact on the ongoing capacity of those individuals to provide compassionate care."

Sources: www.theglobeandmail.com/news/british-columbia/vancouver-to-become-first-city-to-regulate-medical-pot-dispensaries/article24071461/
www.timescolonist.com/news/local/victoria-pushing-to-regulate-marijuana-shops-not-close-them-1.1929633

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“When the last tree has been cut down, the last fish caught, the last river poisoned, only then will we realize that one cannot eat money.”



Lyme Disease and Cannabidiol

Lyme disease is an inflammatory disease characterized at first by a rash, headache, fever, and chills, and later by possible arthritis and neurological and cardiac disorders; it is caused by the bacterium *Borrelia burgdorferi* that are transmitted by ticks. Controversy clouds the true incidence of Lyme disease because no test is definitively diagnostic for the disease.

Dr. Murakami of Hope, BC, a retired physician who took a special interest in Lyme disease, was regularly sought out by patients to treat the disease because of his relative success using antibiotics over long periods of time. Dr. Murakami's non-conventional approach drew the ire of his colleagues and he was forced into early retirement in 2008 by the College of Physicians and Surgeons of B.C.


During his years of practice, some of Dr. Murakami's Lyme disease patients revealed that they used cannabis to help treat the symptoms of pain, arthritis, fatigue, and depression when standard medications were not helping. Initially he was “deathly” against the use of cannabis and smoking, but he modified his attitude with observation and directed his patients to use cannabidiol (CBD) because of its lack of psychoactive effects.

Dr. Murakami was later diagnosed with a brain tumour. His research led him to a case where the use of CBD had dissolved a glioma tumour. He thought it was impossible until he saw the MRI reports showing the absolute gradual resolution of the tumour in four months.

“Other anecdotal cases of cannabidiol treating chronic infections resistant to the standard antibiotics convinced me that there was an antibiotic effect with cannabidiol.”

Recently the Dr. E. Murakami Centre for Lyme Research, Education and Assistance has initiated research testing CBD on live spirochetes; the positive evidence from the first stage is being continued in a second stage at an American university.

Source: <http://www.murakamicentreforlyme.org/>



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Health Canada
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“It's important that people know that marijuana is not a medicine.”

-- Rona Ambrose, Federal Health Minister (told to CBC Radio host Stephen Quinn, April 2015)