



Vol. 7, Issue 1
February 2015

CANNABINOID CHRONICLES

Medical Cannabis News and Information

Alzheimer's Disease and Medical Cannabis

Neurodegenerative diseases, a dysfunction of the central nervous system due to nerve cell damage, are debilitating at a minimum, fatal at their worst. There are no known cures - current treatments are to mediate symptoms and try to provide relief from a myriad of physiological complications.

Alzheimer's disease (AD) is a chronic neurodegenerative disease that leads to dementia (decline in memory or other thinking skills) and the inability of a person to perform everyday activities. As the disease advances, symptoms can include: problems with language, disorientation, mood swings, loss of motivation, not managing self-care, and behavioural issues. As a person's condition declines they often withdraw from family and society. Gradually, bodily functions are lost, ultimately leading to death. Although the speed of progression can vary, the average life expectancy following diagnosis is three to nine years. Alzheimer's disease accounts for 60% to 80% of dementia cases.

Recent evidence suggests that AD is caused by the buildup in the brain of extracellular plaques (made of protein aggregates called amyloids, specifically beta-amyloid (A β) and intracellular tangles (made up of tau protein). These processes lead to destruction of brain cells and, subsequently, to severe dementia and associated issues. Abnormal accumulation of amyloid fibrils in organs may lead to amyloidosis, and may play a role in AD and various other neurodegenerative disorders.

Emerging research suggests that whole-plant cannabis could have benefits in not only treating some of the symptoms experienced by AD patients, such as insomnia, anxiety or depression, but also in reversing the amyloid accumulation in the brain.

A study published in *Molecular and Cellular Neuroscience* (Sept. 2013) (www.sciencedirect.com/science/article/pii/S104474311300064X) provides evidence that plant-based cannabinoids may be effective in reversing the accumulation of amyloid in the brain by assisting in its transport across the blood-brain barrier (BBB) and out of the brain. "Cannabinoid receptor agonism or inhibition of endocannabinoid-degrading enzymes significantly enhanced A β clearance across the BBB..." A β clearance doubled when cannabinoid receptors were stimulated. This study could be the beginnings of enlightenment about AD treatment; it sheds light on how cannabinoid treatment reduces the burden placed on the Alzheimer's brain by A β build-up.

Another study published in the journal *Neuron* (June 2014) (www.ncbi.nlm.nih.gov/pubmed/24945775) suggests that endocannabinoids (human-produced cannabinoids) may assist in inhibiting the effects of A β on pyramidal cell conduction (i.e. brain cell communication) and neuroplasticity (i.e. changes in brain cell function, connection, and communication) in the hippocampus (an area of the brain involved in memory formation, organization, and storage). However, due partially to differences in length of effect between endocannabinoids and exogenous cannabinoids (e.g. cannabis use), there was no evidencesee page 4



International Association for Cannabinoid Medicines (IACM) Bulletin

Cannabis use in combination with opioids better reduces pain than opioids alone

Pain patients who receive opioids experience better pain relief if they also take cannabis. This is the result of a survey conducted by scientists of the Australian National Drug and Alcohol Research Centre and other institutions. The Pain and Opioids IN Treatment (POINT) study included 1514 people in Australia who had been prescribed pharmaceutical opioids for chronic non-cancer pain. Data on cannabis use, cannabis use disorder and cannabis use for pain were collected.

One in six (16%) had used cannabis for pain relief, 6% in the previous month. A quarter reported that they would use it for pain relief if they had access. Those using cannabis for pain on average reported greater pain severity, had been prescribed opioids for longer and were on higher opioid doses. Researchers concluded that “Cannabis use for pain relief purposes appears common among people living with chronic non-cancer pain, and users report greater pain relief in combination with opioids than when opioids are used alone. “

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25533893>

THC induced impairment on decoding emotional facial expressions is attenuated by cannabidiol

Acute administration of THC impairs recognition of emotions expressed by human faces. A study with 48 volunteers investigated the effects of THC and CBD, both alone and in combination on emotional facial affect recognition. They were administered, THC (8mg), CBD (16mg), THC+CBD (8mg+16mg) and placebo, by inhalation, on four different occasions. They completed an emotional facial affect recognition task including fearful, angry, happy, sad, surprise and disgust faces varying in intensity from 20% to 100%.

The study conducted by researchers of the Univ. College London, UK, found that CBD improved emotional facial affect recognition at 60% emotional intensity, while THC was detrimental to the recognition of ambiguous faces of 40% intensity. The combination of THC+CBD produced no impairment. Relative to placebo, both THC alone and combined THC+CBD equally caused psychic effects. CBD did not cause such effects.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25534187>

Anandamide reduces relapse in cocaine dependency

Anandamide decreases cocaine-seeking behaviour and stress-induced relapse in cocaine dependent rats suggesting that stimulation of endocannabinoids “could be helpful to prevent relapse to cocaine addiction.” University of Poitiers, France.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25522382>

Olive oil may be beneficial in colon cancer by modulating CB1 receptors

New research demonstrates that olive oil modulates the expression of CB1 receptors in a way that it suppresses colon cancer cell proliferation. Authors wrote that this may “provide a new therapeutic avenue for treatment and/or prevention of colon cancer.”

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25533906>

Tetrahydrocannabivarin may be helpful in obesity

The natural cannabinoid tetrahydrocannabivarin (THCV) altered the nerve response to pleasant and unpleasant stimuli in a way that it “suggests therapeutic activity in obesity,” researchers of the Universities of Reading and Oxford, UK, wrote in the International Journal of Neuropsychopharmacology. THCV is a neutral CB1 receptor antagonist. Researchers hypothesized that THCV would, unlike the CB1 receptor antagonist rimonabant, leave intact neural reward responses but augment aversive responses. Rimonabant was approved in some European countries for some time for the treatment of obesity, but was associated with severe side effects, such as suicidal ideation. 20 healthy volunteers received a single dose of THCV (10mg) and placebo on two separate occasions.

The neural response to rewarding (sight and/or flavour of chocolate) and aversive stimuli (picture of moldy strawberries and/or a less pleasant strawberry taste) was measured using functional Magnetic Resonance Imaging. There were no significant differences between groups in subjective ratings. However, THCV increased responses to chocolate stimuli in several brain regions (midbrain, anterior cingulate cortex, caudate, and putamen). THCV also increased responses to aversive stimuli in the amygdala, insula, mid orbitofrontal cortex, caudate, and putamen.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25542687>

Cannabinoids may protect damage to the kidneys in diabetes

High blood glucose increases the risk of developing diabetic nephropathy (kidney damage). The number of CB1 and GPR55 receptors in certain parts of the kidney (proximal tubules) is “altered in response to exposure to elevated levels of glucose and albumin.” Researchers suggest investigating “if these receptors are effective physiological targets for the treatment and prevention of diabetic nephropathy.” College of Health and Biomedicine, Victoria University, Melbourne, Australia.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/25545857>

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

Updates on Upcoming MMAR Trial

Justice Manson has ruled on two requests that came before the court in late 2014/early 2015; both issues arose out of the ongoing court case that challenges the unconstitutionality of the new MMAPR.

On December 30, 2014, Justice Manson rejected a request by the plaintiffs to back-date the Health Canada MMAR licenses to March 21, 2013, such that those who held a valid Authorization to Possess (ATP) on that date would be exempted. The original dates chosen for exemption by Manson remain: individuals must have held a valid ATP on **March 21, 2014**; individuals must have held a valid Personal-Use Production licence or Designated-Person Production licence on, or after, **September 30, 2013**, where there is also an associated valid ATP as of March 21, 2014.

On January 6, 2015, Justice Manson rejected a motion by the plaintiffs to adjourn the trial to a later date. This request arose out of the upcoming appeal of *R v Smith* (unconstitutionality of allowing dried cannabis only). It was argued that “the Section 1 and 7 Charter issues are the same and central to both cases and therefore this matter should await the decision of the SCC (Supreme Court of Canada) in *R v Smith*, before proceeding”. The plaintiffs felt that the SCC decision and the remedy that comes from it may render unnecessary the need for the trial. Among various reasons for rejection, Manson stated that there more issues at stake than the constitutional ability to have access to dried cannabis.

Source: <http://www.johnconroy.com/mmar.htm>



Prof. Raphael Mechoulam Honoured for 50 Years of Cannabinoid Research

Prof. Ralph Mechoulam is being honoured by the International Association for Cannabinoid Medicines for his 50 years of cannabinoid research. Back in 1964 Prof. Raphael Mechoulam, together with his colleague Prof. Yechiel Gaoni, published a ground-breaking scientific article on the isolation and complete elucidation of the structure of delta-9-tetrahydrocannabinol (THC).

Visit <http://cannabis-med.org/members/50-years-of-cannabinoid-research-by-raphael-mechoulam/> for a video.

Source: http://www.cannabis-med.org/english/bulletin/www_en_db_cannabis_artikel.php?id=441

The War On Drugs Is An Excuse To Treat People Like Crap

Formal drug prohibition laws in North America have been around since the 1800's when alcohol sales were withheld from local First Nations in Massachusetts. Designed to 'prevent harm', many anti-drug laws and subsequent actions have created far more harm than if they had done nothing at all. And many times the sufferers have been/are of a particular race and/or financial state suggesting that drug laws are racially, culturally and 'morally' motivated.

Richard Nixon in the 1960's and 70's took the opportunity to add his particular flair to anti-drug programs by ramping it up and coining the term "war on drugs". One of his aides, John Ehrlichman, made an interesting confession in 1992 regarding their approach:

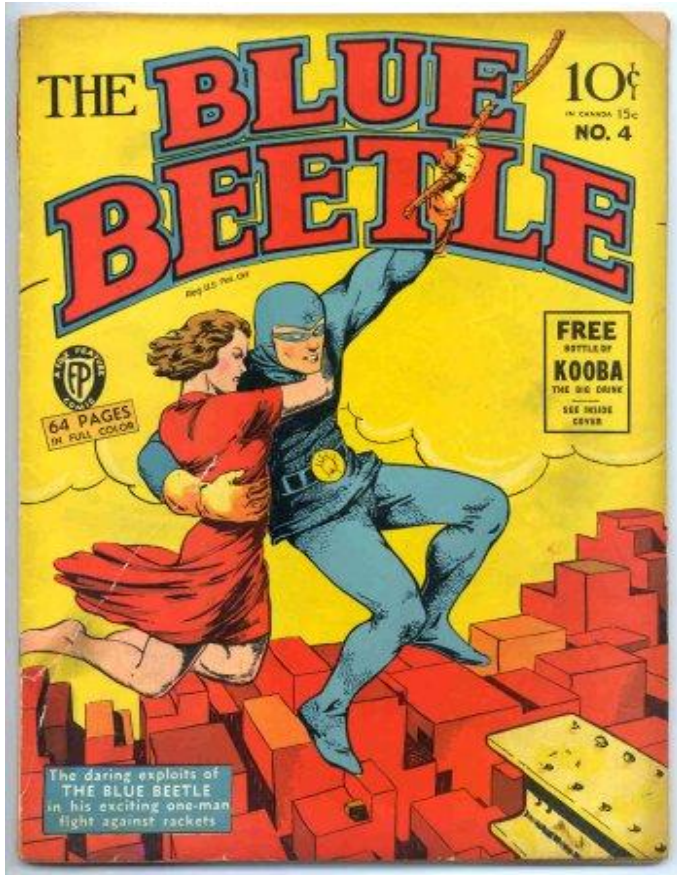
.... "[L]ook, we understood we couldn't make it illegal to be young or poor or black in the United States, but we could criminalize their common pleasure. We understood that drugs were not the health problem we were making them out to be, but it was such a perfect issue for the Nixon White House that we couldn't resist it."

... "[T]he Nixon campaign in 1968, and the Nixon White House after that, had two enemies: the antiwar Left, and black people. You understand what I'm saying? We knew we couldn't make it illegal to be either against the war or black. But by getting the public to associate the hippies with marijuana and blacks with heroin, and then criminalizing both heavily, we could disrupt those communities. We could arrest their leaders, raid their homes, break up their meetings, and vilify them night after night on the evening news. Did we know we were lying about the drugs? Of course we did."

It's funny (sad?) how times really haven't changed.

Sources: <http://www.beyondthc.com/report-identifies-dr-mikuriyas-accuser-at-nimh/>

Visit our website at www.thevics.com



Alzheimer's Disease from Page 1...

provided by this particular study to suggest that use of whole-plant/raw plant cannabis is beneficial for AD treatment.

Another study published in the *Journal of Alzheimer's Disease* (Aug. 2014) (<http://hscweb3.hsc.usf.edu/blog/2014/08/27/marijuana-compound-may-offer-treatment-alzheimers-disease-usf-preclinical-study-finds/>) found that very low doses of delta9-THC were able to reduce A β aggregation with no observed damage, and were also able to improve the function of mitochondria (the part of cells that produces energy) *in vitro* (i.e. cells were tested outside of the body). Since the accumulation of A β *in vivo* (i.e. within the body, more specifically within the brain, in this case) is the major cause for AD progression, preventing such accumulation will likely lead to prevention or slowing of AD and its symptoms. According to the researchers, "These sets of data strongly suggest that THC could be a potential therapeutic treatment option for AD through multiple functions and pathways."

Further research will not only provide knowledge about symptom management but should also point to novel therapies which may help to prevent progression, and potentially initiation, of the disease.

Sources:


Backes, Michael (2014). *Cannabis Pharmacy - The Practical Guide to Medical Marijuana*. New York, NY: Black Dog & Leventhal Publishers, Inc.

Dorm, Drake (July 18, 2013). "Study: Cannabis Could Help Battle Cause Of Alzheimer's." www.medicaljane.com. Retrieved on Jan 5, 2015 from <http://www.medicaljane.com/2013/07/18/a-place-for-cannabis-in-treatment-of-alzheimers/>

Gerard, Arielle (Nov. 17, 2014). "An Overview Of Alzheimer's Studies with Medical Marijuana." www.medicaljane.com. Retrieved on Jan 5, 2015 from <http://www.medicaljane.com/2014/11/17/alzheimers-disease-and-medical-marijuana/>



"Alzheimer's Disease." Wikipedia. Retrieved on Jan. 14, 2015 from http://en.wikipedia.org/wiki/Alzheimer's_disease

Image courtesy: <http://www.redorbit.com/media/uploads/2013/09/Alzheimers-Disease-thinkstock-181156970-617x416.jpg>

SACRED HERB 

Glass / Vapes / Bongs
Chaos & Culture

Paul Reid Dan Brown

106-561 Johnson St Victoria BC V8W 1M2
250-384-0659 www.sacredherb.com  

RESOURCE DIRECTORY:

AIDS Vancouver Island
3rd Fl- 713 Johnson St, Victoria
250-384-2366

VIPWA
101-1139 Yates Street, Victoria
250-382-7927

**The Action Committee of
People with Disabilities**
948 View Street, Victoria
250-383-4105

MS Society of Canada
1004 North Park Street, Victoria
(250) 388-6496

HepC BC
2642 Quadra Street, Victoria
250- 595-3892

BC Cancer Agency
2410 Lee Ave, Victoria
(250) 519-5500

Canadians for Safe Access
www.safeaccess.ca

John W. Conroy, Q.C.
1-877-852-5110 (toll free)
www.johnconroy.com

Kirk Tousaw, Barrister
604-836-1420
www.tousawlaw.ca

DrugSense
www.drugsense.org

**BC Coalition of People
With Disabilities**
1-800-663-1278

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

"The single biggest problem in communication is the illusion that it has taken place."

-- George Bernard Shaw (1856-1950)