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# CANNABINOID CHRONICLES

## Medical Cannabis News and Information

### All Cannabis Forms Permissible, Supreme Court Rules

The legal challenge to allow patients to use medical cannabis in any form they find effective has finally been successful in the Supreme Court of Canada (SCC).

The unanimous decision on June 11 by the seven judges of the SCC states that restricting ingestion of cannabis for medical purposes to only dried form is unconstitutional. The restriction was initially put in place when the federal government introduced the Marihuana for Medical Purposes Regulations (MMPR) in April 2014.

“We conclude that the prohibition of non-dried forms of medical marihuana limits liberty and security of the person in a manner that is arbitrary and hence is not in accord with the principles of fundamental justice. It therefore violates s. 7 of the Charter [Canadian Charter of Rights and Freedoms].”

The decision also struck parts of the Controlled Drugs and Substances Act (CDSA).

“We conclude that the appropriate remedy is a declaration that ss. 4 and 5 of the CDSA are of no force and effect, to the extent that they prohibit a person with a medical authorization from possessing cannabis derivatives for medical purposes.”

The ruling also affirmed the acquittal of Owen Smith from Victoria who was charged with possession for the purpose of trafficking and unlawful possession of cannabis in 2009. Smith was caught baking cannabis-infused cookies for the now Victoria Cannabis Buyers Club. Smith and his legal team successfully argued that the law under which he was charged was unconstitutional and violated Section 7 of the Charter.

Technically, this ruling applies to persons with an MD's recommendation who utilize legally obtained cannabis.

See: <http://scc-csc.lexum.com/scc-csc/scc-csc/en/item/15403/index.do>

### Post-Traumatic Stress Disorder and Medical Cannabis

Post-traumatic stress disorder (PTSD) is an anxiety disorder triggered primarily by exposure to one or more traumatic events, whether experienced directly or witnessed. PTSD can be caused by a wide variety of traumatic events such as war, natural disaster, accident, sexual abuse, and violent crime. PTSD may start within three months of a traumatic event, but sometimes symptoms may not appear until years later.

PTSD symptoms are generally grouped into four types: intrusive memories (flashbacks, recurrent upsetting memories, nightmares), avoidance of any reminder of trauma, negative changes in thinking and mood (numbness, hopelessness, listlessness), or changes in emotional reactions (anger, guilt, self-destructive behaviour). The primary treatment for PTSD is psychotherapy and counselling, but often includes anti-depressants and/or anti-anxiety medication.

Using cannabis to escape the trauma of war has been recorded anecdotally for hundreds of years. US soldiers smoked local Asian cannabis to deal with the horror of combat in the Vietnam War; moreover, some never stopped using it after they came home. One estimate pegs the incidence of PTSD as high as 30 per cent for people who have spent time in war zones, similar to law enforcers or emergency personnel. In general population, roughly 1 in 10 Canadians will suffer from PTSD.

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# **International Association for Cannabinoid Medicines (IACM) Bulletin**

## ***CBD improved therapeutic results after transplantation of blood stem cells***

In an open study with 48 adult patients undergoing blood stem cell transplantation, CBD improved the therapeutic outcome. “The combination of CBD with standard GVHD [Graft versus Host Disease] prophylaxis is a safe and promising strategy to reduce the incidence of acute GVHD,” researchers of Tel Aviv University, Israel, wrote in the journal *Biology of Blood and Marrow Transplantation*. CBD in a daily dose of 300 mg was given orally starting 7 days before transplantation until day 30.

Thirty-eight patients (79%) had acute leukaemia or myelodysplastic syndromes. The median follow-up was 16 months. CBD was generally well-tolerated. None of the patients developed acute Graft versus Host Disease (GVHD) while consuming CBD. Researchers found that the incidence rates of grade 2-4 acute GVHD 100 days after the transplantation was 12.1%. Compared to 101 control subjects given standard GVHD prophylaxis, the risk of developing grade 2-4 acute GVHD among subjects treated with CBD plus standard GVHD prophylaxis was reduced to 30%. Authors wrote that “a randomized double blind controlled study is warranted.”

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/26033282>

## ***Endocannabinoids may be helpful in fragile X syndrome***

The endocannabinoid anandamide had some positive effects in a mouse model of fragile X syndrome (FXS), a genetic syndrome, which is associated with intellectual disability, social anxiety and often with autism. Researchers wrote that their results indicate that the endocannabinoid system “is involved in FXS and suggest that the eCB system is a promising target for treatment of FXS.”

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/25979787>

## ***Successful treatment of achalasia with cannabis***

Researchers reported the case of a patient diagnosed with treatment-resistant achalasia. He first used cannabis at age 20 and identified benefits regarding achalasia symptoms. He maintained regular moderate cannabis use for nine years, with minimal digestive inconvenience. Achalasia of the oesophagus is a failure of the muscles to relax, which can cause severe difficulties to swallow.

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/26034374>

## ***Cannabinoids protect nerve cells of the eye's retina***

Research with rats suggests that endogenous and synthetic cannabinoids protect nerve cells in the retina against the toxicity of high amounts of the neurotransmitter AMPA and this effect involves the activation of CB1 receptors.

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/25989217>

## ***Cannabis use associated with reduced diabetes risk***

Cannabis use may have a protective effect against the development of diabetes. This is the conclusion by researchers of the Department of Epidemiology and Biostatistics of Michigan State Univ. in East Lansing, USA, from a meta-analysis of eight large independent studies.

Results show that recently active cannabis smoking and diabetes are inversely associated. The meta-analytic summary odds ratio was 0.7, which means that cannabis use was associated with a 30% reduction of diabetes risk. Authors concluded that “current evidence is too weak for causal inference, but there now is a more stable evidence base for new lines of clinical translational research on a possibly protective (or spurious) cannabis smoking-diabetes mellitus association suggested in prior research.”

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/25978795>

## ***Simultaneous intake of THC and alcohol increases THC concentrations in blood***

A study by the National Institute on Drug Abuse in Baltimore, USA, shows for the first time that the simultaneous use of alcohol and cannabis produces significantly higher blood concentrations of THC than cannabis use alone. Researchers studied 19 adult participants who drank placebo or a moderate dose of alcohol 10 minutes prior to inhaling 500 mg of placebo, low-dose (2.9% THC), or high-dose (6.7% THC) vaporized cannabis.

The researchers found that with no alcohol, the median maximum blood concentrations for low and high THC doses were 32.7 and 42.2 ng/ml THC, respectively. With alcohol, the median maximum blood concentrations for low and high THC doses were 35.3 and 67.5 ng/ml THC, which is significantly higher than without alcohol. A relevant number of participants (16.7%) presented with a positive THC concentration in blood with a concentration of 1 ng/ml or above at 8.3 hours after intake of cannabis.

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/26019183>

## ***Rhythmic changes of endocannabinoid concentrations in the pineal gland***

The endocannabinoid anandamide (AEA) showed rhythmic changes in rat pineal glands with higher levels during the light-period and reduced amounts at the onset of darkness. The pineal gland is of high importance for the day night rhythm. Johann Wolfgang Goethe-Universität, Frankfurt am Main, Germany

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

**For more info visit: [www.cannabis-med.org/](http://www.cannabis-med.org/)**

## Couple Donate \$33 Million Towards Medical Cannabis Research

An Australian couple have donated \$33.7 million to the Sydney University in Australia to fund medicinal cannabinoid research. This unprecedented gift from Barry and Joy Lambert will be used to fund The Lambert Initiative for Cannabinoid Therapeutics.

"The experience of our granddaughter, who suffers debilitating epilepsy, has opened our eyes to the extraordinary possibility of cannabinoids treating not only her condition but a range of chronic illnesses that often don't respond to conventional treatments," said Barry Lambert.

A priority of the Lambert Initiative will be to understand how cannabidiol (CBD) works to treat paediatric epilepsy and to explore the potential of the nine other cannabinoids, currently identified as of greatest therapeutic interest, to address the condition.

The strategy will go on to determine which of these cannabinoids hold the greatest promise in treating specific diseases and move them towards human clinical trials.

Other conditions to fall under the research umbrella will include: cancer, chronic pain, obesity and anorexia, addictions and mental health, and dementia.

Additionally, the group will be conducting a large national survey of existing users of medicinal cannabis products and their perceived effectiveness among users. Pending approval, they also wish to provide chemical analysis of the products currently being used so as to link a cannabinoid profile to perceived effectiveness.

Visit: <http://sydney.edu.au/science/lambert/>

Sources: <http://sydney.edu.au/news/84.html?newscategoryId=1&newsstoryid=15109>



## Post-Traumatic Stress Disorder and Medical Cannabis (continued from page 1)

Three areas of the brain in which function may be altered in PTSD have been identified: the prefrontal cortex, the amygdalae, and hippocampus. The amygdalae, which perform a primary role in the processing of memory, are associated with fear conditioning and emotional memory. PTSD changes the structure and function of the amygdalae causing dysfunction.

One model proposes that PTSD is associated with hyperarousal of the amygdalae and insufficient top-down control by the prefrontal cortex and the hippocampus, in particular during memory extinction. It suggests that an initial memory was never processed properly by the brain and any stimulus similar to the traumatic event is perceived as the event occurring again.

Research has shown that the cannabinoid system is integrally related to memory, specifically to memory extinction (the normal, healthy process of removing associations from stimuli). By aiding in memory extinction, cannabis could help patients reduce their association between stimuli and the traumatic situations in their past.

A 2013 study found that pharmacological enhancement of extinction learning is feasible in humans using cannabinoid system modulators.

A study in 2014 found that administering synthetic cannabinoids soon after a traumatic event can prevent PTSD-like symptoms in rats.

Another 2014 study with only 10 patients found that orally-absorbable THC caused a statistically significant improvement in global symptom severity, sleep quality, frequency of nightmares, and PTSD hyperarousal symptoms.

Tilray, a licensed producer from Nanaimo, BC, is seeking approval from Health Canada to sponsor a human clinical trial on the safety and effectiveness of whole-plant cannabis for PTSD. A large US study that will be looking at the effectiveness of treating PTSD in war veterans with cannabis is poised to start this year.

Smoked or vaporized cannabis can provide quick relief for symptoms; oral ingestion can result in long-term effects and more even blood levels, such as for sleeping.

### Sources:

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

<http://www.mayoclinic.org/diseases-conditions/post-traumatic-stress-disorder/basics/definition/con-20022540>

[http://en.wikipedia.org/wiki/Posttraumatic\\_stress\\_disorder](http://en.wikipedia.org/wiki/Posttraumatic_stress_disorder)

<http://veteransformedicallmarijuana.org/content/general-use-cannabis-ptsd-symptoms>

Image: <http://releaf.co/wp-content/uploads/2012/08/PTSD.jpg>

Visit our website at [www.thevics.com](http://www.thevics.com)



## UBC Receives \$1 Million Research Grant

Medical cannabis producer National Green Biomed Ltd. has committed \$1 million to the University of British Columbia to allow researchers to study the therapeutic effects of cannabis.


The contribution will support research by assistant professor of medicine M-J Milloy, who is studying marijuana's potential to treat HIV, and alleviate pain and nausea caused by acute illness and medications used to combat HIV and AIDS.

Milloy, an infectious disease epidemiologist with the UBC Division of AIDS and the British Columbia Centre for Excellence in HIV/AIDS, was the lead investigator on a study published in March that found that HIV positive people who used cannabis at least daily had less than half the concentration of the HIV virus in their blood compared to people who rarely or never consumed cannabis. The study, published in *Drug and Alcohol Review*, was the first epidemiological evidence from human studies that shows cannabis interacts with the underlying mechanism of HIV disease – not just its symptoms. Milloy examines barriers to effective HIV and AIDS treatment, such as homelessness and incarceration, and how addiction treatment can facilitate adherence to HIV therapy.

“We have long heard from our patients that they perceive that they obtain health benefits from cannabis use,” said Dr. Julio Montaner, head of the UBC Division of AIDS and director of the British Columbia Centre for Excellence in HIV/AIDS. “This contribution will allow us to begin to rigorously assess whether these benefits are truly real.”

National Green Biomed Ltd. is awaiting approval from Health Canada to produce and sell medical cannabis as an Authorized Licensed Producer under the MMPR.

Source: <http://news.ubc.ca/2015/06/08/medical-cannabis-company-donates-1-million-to-explore-plants-healing-potential/>



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**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](http://www.drugpolicy.org)

**Media Awareness Project**  
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***“I submit that an individual who breaks a law that conscience tells him is unjust, and who willingly accepts the penalty of imprisonment in order to arouse the conscience of the community over its injustice, is in reality expressing the highest respect for law.”-- Martin Luther King Jr.***