



**Vol. 8, Issue 8**  
**September 2016**

# CANNABINOID CHRONICLES

## Medical Cannabis News and Information

### **New Federal Medical Cannabis Regulations (ACMPR) Effective August 24, 2016**

The deadline was approaching and the federal government had to do something. On Feb. 24, 2016, the Marihuana for Medical Purposes Regulations (MMPR) were declared invalid in a court decision (Allard). The government was given six months to respond legislatively. So, as of August 24, 2016, the new Canadian medical cannabis regulations have taken effect. The government added that the new regulations should not be considered a long-term solution.

The Access to Cannabis for Medical Purposes Regulations (ACMPR) is a blend of the older Medical Marihuana Access Regulations (MMAR) and the MMPR. The Licensed Producers remain the only commercial providers, but the big change is that the regulations will permit personal cultivation of cannabis by the patient or a designated grower. A designated grower can supply up to two persons, with up to four designated growers per site (maximum 8 growing licenses per site). The production numbers appear to be based upon old MMAR requirements: 5 plants per gram/day if grown indoors; 2 plants per gram/day if grown outdoors. Patients will be allowed to possess 150 grams on their persons. Information gleaned from information bulletins suggests that there are no limits on maximum dosage or plant limits.

In a couple of departures from the MMAR, patients will be allowed to participate with the designated grower, and the patient will be allowed to process the dried cannabis into oral or topical byproducts. And, for the first time, the government will allow people to legally submit homegrown cannabis to private labs for testing, which advocates call a major step forward.

In addition to cultivating and selling dried cannabis and oral byproducts, the Licensed Producers are now also the only legal source of starting materials, i.e. seeds or plants,

and “interim supply to individuals who are registered with Health Canada to produce or who have designated someone to produce for them, a limited amount of cannabis for their own medical purposes.”

Further from Health Canada’s Fact Sheet: “Individuals who were previously authorized to possess and/or produce marijuana under the former Marihuana Medical Access Regulations and who meet the terms of the Federal Court injunction order may continue to do so until the Court orders otherwise. Individuals covered by the injunction who wish to change the terms of their license, such as a change in address or designated producer, will be able to do so by registering with Health Canada under the new regulations.”

The ACMPR does not (once again) recognize present storefront medical cannabis dispensaries in any capacity.

Lawyer Kirk Tousaw had this to say on his website ([www.tousawlaw.ca/](http://www.tousawlaw.ca/)): “In my opinion, this represents a significant step forward. The devil is in the details and the full text of the regulations are not currently available. However this response by the Liberal government is significantly more robust and responsive to the Charter ruling than prior responses by the Conservatives.”

John Conroy, Q.C., has posted a brief on his website ([www.johnconroy.com/mmar.htm](http://www.johnconroy.com/mmar.htm)) in response to the new regulations. Conroy highlights seven areas for consideration, including legal allowance for a caregiver (not patient or designated grower) and reasonable access (storefront dispensary vs. Licensed Producer).

With roughly 30,000 persons needing to re-register if they wish to remain legal, the bureaucracy may be seriously under-serviced and over-burdened to process people in a timely fashion.

**Sources:** [www.tousawlaw.ca/2016/08/11/opinion-health-canadas-acmpr-announcement/](http://www.tousawlaw.ca/2016/08/11/opinion-health-canadas-acmpr-announcement/) <http://news.gc.ca/web/article-en.do?nid=1110409>  
<http://healthycanadians.gc.ca/drugs-products-medicaments-produits/buying-using-achat-utilisation/cannabis-medical/index-eng.php>

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

### ***Human: THC may be useful in the treatment of children with spasticity***

In the majority of severely ill children, the treatment with THC showed promising effects in treatment resistant spasticity. This is the result of observations by scientists of the University of Dusseldorf, Germany, published in the *EUropean Journal of Paediatric Neurology*. Sixteen children, adolescents and young adults having complex neurological conditions with spasticity (aged 1.3 to 26.6 years) were treated with THC by a specialized pediatric palliative care team between 2010 and 2015 in a home-care setting.

Drops of an oily THC solution (dronabinol) were administered. A promising therapeutic effect was seen, mostly due to abolishment or marked improvement of severe, treatment resistant spasticity (n = 12). In two cases the effect could not be determined, two patients did not benefit. The median duration of treatment was 181 days (range 23-1429 days). Dosages to obtain a therapeutic effect varied from 0.08 to 1.0 mg THC per kg body weight with a median of 0.33 mg per kg daily in patients with a documented therapeutic effect. When administered as an escalating dosage scheme, side effects were rare and only consisted in vomiting and restlessness (one patient each). Authors concluded that “in the majority of pediatric palliative patients the treatment with dronabinol showed promising effects in treatment resistant spasticity.”

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/27506815>

### ***Human: Cannabis use had no negative effects on the outcome of kidney transplantations***

Recreational use of cannabis had no negative effects on the health of kidney recipients in a study with 1225 patients. Results were published by scientists at the Department of Surgery of the University of Maryland School of Medicine in Baltimore, USA, in the journal *Clinical Transplantation*. They retrospectively reviewed data of kidney recipients from 2008-2013. Cannabis use was defined by positive urine toxicology screen and/or self-reported recent use.

Cannabis use was not associated with worse outcomes. Ninety-two percent of grafts functioned at one year. Among these, measures of kidney function were similar between cannabis users and non-users. Researchers concluded that “isolated recreational marijuana use is not associated with poorer patient or kidney allograft outcomes at one year.”

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/27491049>

### ***Animal: Activation of the endocannabinoid system may be beneficial in autism***

In a study with rats, scientists demonstrated that alterations in endocannabinoid signalling following inflammation after birth contribute to impairments in social behaviour during adolescence, and that increasing endocannabinoid levels “could be a novel target for disorders involving social deficits such as social anxiety disorders or autism.”

Mathison Center for Mental Health, University of Calgary, Canada.

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/27453335>

### ***Animal: Hypothermia and CBD act synergistically to prevent brain damage during birth***

In a study with piglets, the combined protective effect of hypothermia (reduced body temperature) and cannabidiol (CBD) on damage to brain cells caused by reduced oxygen supply during birth was greater than either hypothermia or CBD alone.

Biocruces Health Research Institute Bizkaia, Spain.

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/27462203>

### ***Animal: Cannabinoids reduce nerve cell loss after epileptic seizures***

In studies with rats, in which a status epilepticus was induced, the synthetic cannabinoid WIN55,212-2, which has similar effects as THC increased survival of animals and reduced cell loss in a certain brain region (hippocampus). The cannabinoid also reduced the number of seizures.

Institute of Higher Nervous Activity and Neurophysiology Russian Academy of Sciences, Moscow, Russia.

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/27520083>

### ***Human: Legalization of cannabis in Colorado resulted in an increased number of children with unintentional cannabis intake***

After legalization of cannabis for recreational use in Colorado, USA, there was a significant increase in numbers of admissions of children to the Children’s Hospital Colorado in Aurora due to unintentional intake of cannabis products. The mean age of the children was 2.4 years. The numbers increased from 1.2 per 100,000 population two years prior to legalization to 2.3 per 100,000 population two years after legalization.

**Source:** <http://www.ncbi.nlm.nih.gov/pubmed/27454910>

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

## **Cannabinoids Cool the Intestine**

Inflammatory bowel diseases (IBDs) such as ulcerative colitis and Crohn's disease affects over a million people in the United States, with an estimated indirect cost from work loss of \$3.6 billion annually. Many of these individuals suffer from pain, diarrhea and poor ability to digest their food, and in up to half of those with IBD, the disease is so severe that it ultimately requires surgery to remove the affected bowel segment.

Historically, cannabis has been used to treat diarrhea and has been advocated for the treatment of a variety of other gastrointestinal problems, including Crohn's disease.

More recent pharmacological studies have clearly established that cannabinoids inhibit gastrointestinal motility and secretion by acting on CB1 receptors located on the terminals of both intrinsic and extrinsic submucosal neurons. When administered to mice with chemically induced enteritis, cannabinoids also reduce inflammation and fluid accumulation in the gut.

Cannabinoids inhibit motility and secretion in the intestine. They are now assigned the additional task of curbing excessive inflammation, suggesting that drugs targeting the endogenous cannabinoid system could be exploited for inflammatory bowel disease. These findings may offer a new therapeutic approach to IBD.

Source: [www.ncbi.nlm.nih.gov/pmc/articles/PMC2516444/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2516444/)



## **Cannabis: US Survey Results of Medicinal Vs. Recreational Use**

Cannabis has been legalized for medical use in almost half of the US states. Although laws in these states make the distinction between medical and recreational use of cannabis, the prevalence of people using medical cannabis and how distinct this group is from individuals using cannabis recreationally is unknown at a national level.

A 2013 National Survey on Drug Use and Health (NSDUH) found that 17% of adults who used cannabis in the past year used cannabis medically. There were no significant differences between those who used medically versus recreationally in race, education, past year depression and prevalence of cannabis use disorders. In adjusted analyses, those with medical cannabis use were more likely to have poorer health and lower levels of alcohol use disorders and non-cannabis drug use. Additionally, a third of those who reported medical cannabis use endorsed daily cannabis use compared to 11% in those who reported recreational use exclusively.

Source: [www.ncbi.nlm.nih.gov/pubmed/27262964](http://www.ncbi.nlm.nih.gov/pubmed/27262964)

## **CB2 Cannabinoid Receptor As Potential Target Against Alzheimer's**

The CB2 receptor is one of the components of the endogenous cannabinoid system, a complex network of signaling molecules and receptors involved in the homeostatic control of several physiological functions.

Accumulated evidence suggests a role for CB2 receptors in Alzheimer's disease (AD) and indicates their potential as a therapeutic target against this neurodegenerative disease. Levels of CB2 receptors are significantly increased in post-mortem AD brains, mainly in microglia surrounding senile plaques, and their expression levels correlate with the amounts of A $\beta$ 42 and  $\beta$ -amyloid plaque deposition. Moreover, several studies on animal models of AD have demonstrated that specific CB2 receptor agonists, which are devoid of psychoactive effects, reduce AD-like pathology, resulting in attenuation of the inflammation associated with the disease but also modulating A $\beta$  and tau aberrant processing, among other effects.

CB2 receptor activation also improves cognitive impairment in animal models of AD. This review discusses available data regarding the role of CB2 receptors in AD and the potential usefulness of specific agonists of these receptors against AD.

Full text at can be found at:

[www.ncbi.nlm.nih.gov/pmc/articles/PMC4885828/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4885828/)

Source: [www.ncbi.nlm.nih.gov/pubmed/27303261](http://www.ncbi.nlm.nih.gov/pubmed/27303261)

## US Drug Enforcement Agency Refuses To Re-Schedule Cannabis

It's déjà vu all over again.

After yet another review, the US Drug Enforcement Agency (DEA) just announced that it will not reschedule cannabis to a less restrictive schedule. Meanwhile, cannabis research in the US continues to wither. The DEA has allowed one minor change, however, and that is to make research easier by ending the federal government's monopoly on research-grade cannabis production.

Source: <https://www.dea.gov/divisions/hq/2016/hq081116.shtml>

The College of Family Physicians / Le Collège des Médecins de Famille du Canada  
December • Décembre 2006

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## High on controversy

The medical marijuana debate continues... 1531

## Dossier controversé

La marijuana à des fins médicales... 1535

## Report card

Reactions to performance assessment feedback... 1570

Social justice Editorial... 1525  
Justice sociale Editorial... 1527  
Screening tool for depression Practice Tips... 1549  
As simple as ABCD? Critical Appraisal... 1563  
Chronic pelvic pain CME... 1566  
Amyotrophic lateral sclerosis update CME... 1563  
La continuité des soins oncologique Recherche... 1572  
Health care systems and suffering Research... 1574  
The value of human life Residents' Page... 1613  
La valeur de la vie humaine Page des résidents... 1615

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## Cannabinoid Receptors Found in Human Facial Tissue

Cannabinoid receptors have been localized in the central and peripheral nervous system as well as on cells of the immune system, but recent studies on animal tissue gave evidence for the presence of cannabinoid receptors in different types of tissues. Their presence was supposed also in myofascial tissue, suggesting that the endocannabinoid system may help resolve myofascial trigger points and relieve symptoms of fibromyalgia.

However, until now the expression of CB1 (cannabinoid receptor 1) and CB2 (cannabinoid receptor 2) in fascia has not yet been established. Small samples of fascia were collected from volunteer patients during orthopedic surgery. For each sample were done a cell isolation, immunohistochemical investigation (CB1 and CB2 antibodies) and real time RT-PCR to detect the expression of CB1 and CB2.

Both cannabinoid receptors are expressed in human fascia and in human fascial fibroblasts culture cells, although to a lesser extent than the control gene. We can assume that the expression of mRNA and protein of CB1 and CB2 receptors in fascial tissue are concentrated into the fibroblasts.

This is the first demonstration that the fibroblasts of the muscular fasciae express CB1 and CB2. The presence of these receptors could help to provide a description of cannabinoid receptors distribution and to better explain the role of fasciae as pain generator and the efficacy of some fascial treatments. Indeed, the endocannabinoid receptors of fascial fibroblasts can contribute to modulate the fascial fibrosis and inflammation.

Source: <http://www.ncbi.nlm.nih.gov/pubmed/27349320>

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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**  
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**Media Awareness Project**  
[www.mapinc.org](http://www.mapinc.org)

**Together Against Poverty Society**  
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***"It is not the function of our Government to keep the citizen from falling into error; it is the function of the citizen to keep the Government from falling into error."***

**-- U.S. Supreme Court, in *American Communications Association v. Douds*, 339 U.S. 382,442**