

CANNABINOID CHRONICLES



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Medical Cannabis News and Information

Canada - Licensed Medical Cannabis Users Refuse To Pay

Almost half of the people who are authorized to purchase cannabis for medical purposes from Health Canada will not pay for the product (\$150 plus taxes for 30 grams). 127 people of the 278 patients permitted to buy federal government cannabis (produced under contract by Prairie Plant Systems) are officially in arrears to the sum of \$168,879. 19 users have been cut off because of non-payment. According to Chris Williams, Health Canada spokesperson, "stern" reminder letters are sent out and follow-up telephone calls are made. After 180 days the matter is turned over to a collection agency.

One medical marijuana user and activist slammed Health Canada for requiring often-impooverished patients to buy the product, saying taxpayers have already footed the bill once.

"The Canadian people have already paid for it - I think it's absolutely horrible that we're charging them twice," said Alison Myrden of Burlington, Ont., who has lived with multiple sclerosis for more than a decade.

"We have no money as it is. Most of us are on full disability for life. It's a choice between marijuana or food for most of us."

The first batch of Prairie Plant System cannabis in 2003 was weak and ground to a powdery consistency - it was largely rejected. The 2004 batch was stronger and accepted by a larger number of patients. Myrden says the new batch still falls short in quality.

Prairie Plant Systems recently got a six-month extension of its \$5.75-million contract with Health Canada to June 30. The federal government plans to put out the next contract to tender later this year, though it's unclear how the entire medical cannabis program will fare under the new Tory government. Health Canada is still trying to set up a pilot project that would allow registered users to buy government cannabis at pharmacies.

Source: Montreal Gazette, Feb. 6, 2006.
www.mapinc.org/drugnews/v06/n160/a03.html

Licensee Shapiro Shaken and Stirred

It may not amount to entrapment but legal medical cannabis user and grower Tom Shapiro has suffered through a bureaucratic bungle that threatened his health and put his life in turmoil for weeks. One would think Shapiro is a criminal the way he was treated, however he is yet another Canadian wrestling with the distrustful group at Health Canada and local police forces over **legal** medical cannabis.

Shapiro, who uses medical cannabis to control the symptoms of

AIDS, has been licensed to grow and use medical cannabis for about five years. He encountered problems with his license last fall, when his annual renewal was delayed due to a series of bureaucratic issues including discussions between his doctor and Health Canada on whether his dosage should be increased, and loss of his identification photos.

While waiting for his new license earlier this year, police busted Shapiro's home-based medical cannabis grow operation, seized his plants and his growing equipment and ultimately charged him with one count of production of marijuana under the Controlled Drugs and Substances Act. Shapiro had maintained Health Canada told him he could continue growing medical marijuana until his new license was approved, but police laid a charge against him anyway on the basis that he didn't have a valid license at the time the search warrant was executed, and growing marijuana without a valid license is illegal.

Shapiro has since had the criminal charge for cannabis production dropped and has had all his growing equipment and medicine returned by city police. He returned to Regina police headquarters Mar. 2 and collected 21 marijuana plants seized by officers.

While it was a favourable decision for Shapiro in the end, medical cannabis activists were furious about his treatment by officials.

"I'm very, very angry and upset at what happened," said Lynne Belle-Isle of the Canadian AIDS Society, who has been in frequent contact with Shapiro since his house was raided.

"There seems to be a broken link in the communications at Health Canada. We're talking about a very sick man who can barely walk. He's not exactly a threat to police or the community and he's been trying so hard to abide by the law."

And our tax dollars are paying for these farcical theatrics?

Source: Regina Leader-Post, Feb. 17, 2006,
www.mapinc.org/drugnews/v06/n238/a05.html; Star Phoenix, Mar. 3, 2006,
www.mapinc.org/drugnews/v06/n270/a09.html



Monday Magazine Awards

Thanks again for the nomination for favourite local publication; congratulations goes to the winner 'Absolute Underground'. Congrats also goes out to our venerable director Philippe Lucas who was voted 'Local politician with best dramatic flair'. See you next year... (and we're gonna win)



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Cannabis and the Brain: A User's Guide

by Paul Armentano, Senior Policy Analyst, NORML

(Editor's note: research references have not been included for space reasons. See Feb.2006 issue of HEADS magazine pgs. 22-24. www.headsmagazine.com, or visit www.sportscartel.com/forum/lofiversion/index.php/t42656.html for full text)

Preclinical data recently published in the Journal of Clinical Investigation demonstrating that cannabinoids may spur brain cell growth has reignited the international debate regarding the impact of marijuana on the brain. However, unlike previous pseudo-scientific campaigns that attempted to link pot smoking with a litany of cognitive abnormalities, modern research suggests what many cannabis enthusiasts have speculated all along: ganja may be good for you.

Cannabinoids & Neurogenesis

"Study turns pot wisdom on its head," pronounced the Globe and Mail in October. News wires throughout North America and the world touted similar headlines – all of which were met with a monumental silence from federal officials and law enforcement. Why all the fuss? Researchers at the University of Saskatchewan in Saskatoon found that the administration of synthetic cannabinoids in rats stimulated the proliferation of newborn neurons (nerve cells) in the hippocampus region of the brain and significantly reduced measures of anxiety and depression-like behavior. The results shocked researchers – who noted that almost all other so-called "drugs of abuse," including alcohol and tobacco, decrease neurogenesis in adults – and left the "pot kills brain cells" crowd with a platter of long-overdue egg on their faces.

While it would be premature to extrapolate the study's findings to humans, at a minimum, the data reinforce the notion that cannabinoids are unusually non-toxic to the brain and that even long-term use of marijuana likely represents little risk to brain function. The findings also offer further evidence that cannabinoids can play a role in the alleviation of depression and anxiety, and that cannabis-based medicines may one day offer a safer alternative to conventional anti-depressant pharmaceuticals such as Paxil and Prozac.

Cannabis & Neuroprotection

Not only has modern science refuted the notion that marijuana is neurotoxic, recent scientific discoveries have indicated that cannabinoids are, in fact, neuroprotective, particularly against alcohol-induced brain damage. In a recent preclinical study – the irony of which is obvious to anyone who reads it – researchers at the US National Institutes of Mental Health (NIMH) reported that the administration of the non-psychoactive cannabinoid cannabidiol (CBD) reduced ethanol-induced cell death in the brain by up to 60 percent. "This study provides the first demonstration of CBD as an in vivo neuroprotectant ... in preventing binge ethanol-induced brain injury," the study's authors wrote in the May 2005 issue of the Journal of Pharmacology and Experimental Therapeutics. Alcohol poisoning is linked to hundreds of preventable deaths each year in the United States, according to the Centers for Disease Control, while cannabis cannot cause death by overdose.

Of course, many US neurologists have known about cannabis' neuroprotective prowess for years. NIMH scientists in 1998 first touted the ability of natural cannabinoids to stave off the brain-damaging effects of stroke and acute head trauma. Similar findings were then replicated by investigators in the Netherlands and Italy and, most recently, by a Japanese research in 2005. However, attempts to measure the potential neuroprotective effects of synthetic cannabinoid-derived medications in humans have so far been inconclusive.

Cannabinoids and Glioma

Of all cancers, few are as aggressive and deadly as glioma. Glioma tumors quickly invade healthy brain tissue and are typically unresponsive to surgery and standard medical treatments. One agent they do respond to is cannabis.

Writing in the August 2005 issue of the Journal of Neurooncology, investigators at the California Pacific Medical Center Research Institute reported that the administration of THC on human glioblastoma multiforme cell lines decreased the proliferation of malignant cells and induced apoptosis (programmed cell death) more rapidly than did the administration of the synthetic cannabis receptor agonist, WIN-55,212-2. Researchers also noted that THC selectively targeted malignant cells while ignoring healthy ones in a more profound manner than the synthetic alternative. Patients diagnosed with glioblastoma multiforme typically die within three months without therapy.

Previous research conducted in Italy has also demonstrated the capacity of CBD to inhibit the growth of glioma cells both in vitro (e.g., a petri dish) and in animals in a dose dependent manner. As a result, a Spanish research team is currently investigating whether the intracranial administration of cannabinoids can prolong the lives of patients diagnosed with inoperable brain cancer.

Most recently, a scientific analysis in the October issue of the journal Mini-Reviews in Medicinal Chemistry noted that, in addition to THC and CBD's brain cancer-fighting ability, studies have also shown cannabinoids to halt the progression of lung carcinoma, leukemia, skin carcinoma, colorectal cancer, prostate cancer and breast cancer.

Cannabinoids & Neurodegeneration

Emerging evidence also indicates that cannabinoids may play a role in slowing the progression of certain neurodegenerative diseases, such as Multiple Sclerosis, Parkinson's disease, Alzheimer's, and Amyotrophic Lateral Sclerosis (a.k.a. Lou Gehrig's Disease). Recent animal studies have shown cannabinoids to delay disease progression and inhibit neurodegeneration in mouse models of ALS, Parkinson's, and MS. As a result, the Journal of Neurological Sciences recently pronounced, "There is accumulating evidence ... to support the hypothesis that the cannabinoid system can limit the neurodegenerative processes that drive progressive disease," and patient trials investigating whether the use of oral THC and cannabis extracts may slow the progression of MS are now underway in the United Kingdom.

Cannabis & Cognition

But what about claims of cannabis' damaging effect of cognition? A review of the scientific literature indicates that rumors regarding the "stoner stupid" stereotype are unfounded. According to clinical trial data published this past spring in the American Journal of Addictions, cannabis use – including heavy, long-term use of the drug – has, at most, only a negligible impact on cognition and memory. Researchers at Harvard Medical School performed magnetic resonance imaging on the brains of 22 long-term cannabis users (reporting a mean of 20,100 lifetime episodes of smoking) and 26 controls (subjects with no history of cannabis use). Imaging displayed "no significant differences" between heavy cannabis smokers compared to controls, the study found.

Previous trials tell a similar tale. An October 2004 study published in the journal Psychological Medicine examining the potential long-term residual effects of cannabis on cognition in monozygotic male twins reported "an absence of marked long-term residual effects of marijuana use on cognitive abilities." A 2003 meta-analysis published in the Journal of the International Neuropsychological Society also "failed to reveal a substantial, systematic effect of long-term, regular cannabis consumption on the cognitive functioning of users who were not [continued top next page]

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Cannabis and the Brain: A User's Guide continued:
acutely intoxicated," and a 2002 clinical trial published in the Canadian Medical Association Journal determined, "Marijuana does not have a long-term negative impact on global intelligence." Finally, a 2001 study published in the journal Archives of General Psychiatry found that long-term cannabis smokers who abstained

IACM Bulletin: www.cannabis-med.org

Netherlands: Cannabis pharmacy planned in Groningen

Patients seeking pain relief may soon be heading for the Dutch city of Groningen to buy affordable and potent medical cannabis in the country's first pharmacy specializing in the drug. Although cannabis is readily available in the country's famous coffee shops, the foundation for Medicinal Cannabis Netherlands wants to launch a pharmacy in the northern Dutch city so patients can buy high-grade cannabis at affordable prices.

The price of Groningen's medicinal cannabis will be around 5 euros per gram, which is similar to prices in coffee shops the NRC Handelsblad reported on 31 January. The Office of Medicinal Cannabis of the Dutch Health Ministry and the community of Groningen as well as the local police all support the endeavour. Two more cannabis pharmacies are planned in the towns of Hoogezeand and Assen.

Source: Reuters of 1 February 2006

US: New Mexico

The state Senate overwhelmingly approved a proposal on Jan. 30 to allow seriously ill patients to use cannabis for medical purposes. The bill passed the Senate on a 34-6 vote. It now goes to the House of Representatives, where a similar proposal was stopped last year. The same may happen with the new bill. However, State Governor Bill Richardson has stated that he will sign the bill.

Source: Associated Press of 31 January 2006

Science: Pain

Researchers of the Mayo Clinic in Rochester reviewed the scientific evidence on the use of cannabinoids in chronic pain. In an article for the journal *Annals of Pharmacotherapy* they conclude: "Cannabinoids provide a potential approach to pain management with a novel therapeutic target and mechanism. Chronic pain often requires a polypharmaceutical approach to management, and cannabinoids are a potential addition to the arsenal of treatment options."

Source: Burns TL, Ineck JR. *Ann Pharmacother* 2006 Jan 31

Science: THC protects heart cells in the case of lowered oxygen supply

Israeli researchers at the Bar-Ilan University in Ramat-Gan demonstrated that THC protects heart cells (cardiomyocytes) against the damage caused by hypoxia (reduced oxygen concentration in the blood) in experimental studies. Pre-treatment of cultures of cardiomyocytes with THC for 24 hours prevented leakage of LDH induced by hypoxia. Leakage of LDH (lactate dehydrogenase) from cells is a sign of cell damage.

This protective effect of THC was mediated by the CB2 receptor. CB2 receptor activation by THC induced the production of nitric oxide (NO). Nitric oxide signals the smooth muscles of blood vessels to relax, thus dilating the artery and increasing blood flow. This underlies the action of nitroglycerin and other drugs used in the treatment of heart disease, since these compounds are converted to nitric oxide in the body.

Researchers noted that THC also "probably pre-trains the cardio-

myocytes to hypoxic conditions." They concluded that their research "demonstrates that THC has beneficial effects on cardiac cells and supports the consideration of marijuana for specific medical uses."

Source: Shmist YA, Goncharov I, Eichler M, Shneyvays V, Isaac A, Vogel Z, Shainberg A. Delta-9-tetrahydrocannabinol protects cardiac cells from hypoxia via CB2 receptor activation and nitric oxide production. *Mol Cell Biochem* 2006;283(1-2):75-83

Science: Glaucoma
A synthetic cannabinoid (WIN55212-2) and the endocannabinoid anandamide induced relaxation of the artery that supplies blood to the retina. This effect was mediated by the CB1 receptor. Since one cause of glaucoma may be reduced blood supply, not only the reduction of intraocular pressure but also the improvement of circulation by cannabinoids may be helpful in the disease.

Source: Romano MR and Lograno MD. *Br J Pharmacol* 2006 Feb 13

Science: Neuroprotection
A synthetic cannabinoid (HU210) reduced nerve damage that was caused by the chemical agent peroxynitrite. This effect was not caused by the stimulation of the secretion of the body's own corticosterone but by a direct action of the cannabinoid. Authors conclude that the beneficial effects of cannabinoids on nerve damage associated with multiple sclerosis are achieved by their direct action.

Source: Yang C et al. *Brain Res* 2006 Feb 10

Science: Migraine
Researchers found that the endocannabinoid system was altered in women suffering from migraine. Anandamide levels were reduced in their blood due to increased degradation of the endocannabinoid by platelets. No changes were found in men suffering from migraine compared to healthy controls. Scientists conclude that the reduced anandamide concentration "might reduce the pain threshold and possibly explain the prevalence of migraine in women." Source: Cupini L et al. *Cephalalgia* 2006;26(3):277-81

Definitions:

entrap *v.t.* catch (as) in trap; beguile (person to destruction etc., into doing); hence ~MENT *n.* [French]
(The Concise Oxford Dictionary, 7th ed., 1983)

equality *n.* condition of being equal (*between* two or more; *with* person etc. in or of quality etc.; or absolutely). [Middle English from Old French *equalite* from Latin *aequalitus -tasis* (as equal)]
(*ibid.*)

goof *n.* (slang) foolish or stupid person; mistake; ~ball, (1) marijuana or other drug tablet, (2) foolish or stupid person; hence goofy *a.*, (slang) silly. [variant of dialect *goff* from French *goffe* from Italian *goffo* from medieval Latin *gufus* coarse]
(*ibid.*)

Zeitgeist *n.* spirit of the times; trend of thought and feeling in a period. [German (*zeit* time, *geist* spirit)]
(*ibid.*)

Got questions about growing? Our resident guru Mat has made available an e-mail address where you can direct queries -
askmatb@hotmail.com

Wood Loses Compassion Club Appeal

On Feb 23 New Brunswick Court of Appeal rejected Lynn Wood's argument that she was running a compassion club for medicinal cannabis users. However, the province's high court will still consider Lynn Wood's appeal of her marijuana trafficking conviction, albeit on other grounds.

Lynn Wood was convicted in February 2005 of trafficking marijuana, and was sentenced to a term of one year in prison. The trial judge said she was running a sham compassion club because she sold cannabis to a teenager and an undercover police officer. Wood's lawyer, Margaret Gallagher, appealed on the grounds that there are no rules for compassion clubs in Canada. The three judges of the appeal court threw that argument out.

The judges, however, will consider another aspect of Wood's appeal: that the trial judge failed to give sufficient reasons for convicting her of trafficking. The judges will also consider whether she can serve her one-year sentence out of jail.

Free on bail, Wood has been ordered to reappear before the appeal court on June 20.

Source: CBC Web, 23 Feb 2006, www.mapinc.org/drugnews/v06/n240/a05.html

Kubby Surviving in California Prison

Steve Kubby, an American who fled the US to Canada in 2001 to avoid incarceration from a drug conviction, was handed back to American authorities on Jan. 26, 2006. He was seeking asylum status and had exhausted his appeals to remain in Canada.

Kubby was arrested immediately upon the arrival of his plane at San Francisco International Airport that night, and transported back to Auburn, California.

Kubby is currently in Placer County Jail serving the original 120-day sentence, which is expected to end sometime in late April or

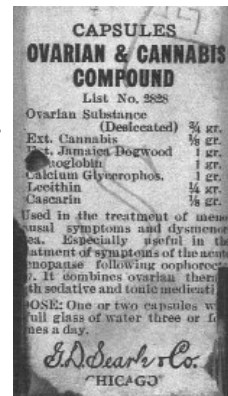
May depending on credits earned for good behaviour. However, new violation of probation charges could be filed by the District Attorney's Office and may result in a further three-year maximum sentence.

Kubby was a leading force behind the development of Proposition 215 in California (1996) that permits the use of cannabis for medical purposes. He also suffers from a rare form of adrenal cancer that he treats mostly with cannabis. Concerns were raised that he would not survive in prison without cannabis; fortunately, his physician Dr. Mikuriya made sure that Kubby had Marinol (synthetic THC) when he checked into the Placer County jail. It is feared, however, that Marinol will not be enough for his particularly aggressive form of cancer.

According to Kubby's wife Michele, between Jan. 26 and Feb. 20 Steve "has lost 25 pounds and has had blood pressure problems due to the poor diet he is being fed. He also has had shingles for three weeks, indicating that his immune system is failing. We are gathering information about the importance of diet and cancer because we are hoping to educate the jail about the danger they are putting Steve in with their poor food quality. So far, the jail has been very stubborn about offering Steve food that will nourish his body's particular needs."

On March 3, Kubby's lawyer presented a motion to modify his sentence and the conditions of his probation. Superior Court Judge John Cosgrove denied the request. Additionally, Cosgrove declined to modify Kubby's terms of probation to allow for alternatives to incarceration, such as house arrest.

Sources: Las Vegas Review-Journal, www.mapinc.org/drugnews/v06/n258/a02.html; Auburn Journal, Mar 5, 2006, www.mapinc.org/drugnews/v06/n275/a08.html



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Health Canada

http://www.hc-sc.gc.ca/dhp-mps/marijuana/index_e.html

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"The most compelling reason for reforming our system is that the system is in no one's interest. It is a suicide machine." – Ronald Wright, "A Short History of Progress"