

CANNABINOID CHRONICLES



Volume #3
Issue #1
September 2005

Medical Cannabis News and Information

So what's with the new name? To more closely reflect the nature of the information within, the term 'cannabinoid' was chosen to head the publication in its third year. While to some it's still the VICS Newsletter, we hope the enhanced name results in greater readership and interest.

Cannabis is one of the oldest medicinal plants known, with evidence of use tracing back over 5000 years. Investigations into the chemistry of the plant began in the 19th century; since then, a total of 483 natural components in *Cannabis Sativa L.* have been isolated or identified.

Cannabinoids, of which there are 66 known varieties in cannabis, are the most distinctive and specific class of compounds known to exist **only** in the cannabis plant and, hence, their name.

Several subclasses have been identified:

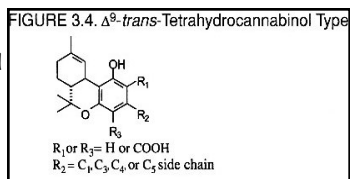
Cannabigerol (CBG) type – six identified, CBG was first cannabinoid discovered

Cannabichromene (CBC) type – five identified

Cannabidiol (CBD) type – seven identified

Delta-9-Tetrahydrocannabinol (delta9-THC) type –

nine identified, THC is considered to be the most psychologically active cannabinoid in the plant material. Its acid precursor is not psychologically active.



Delta-8-Tetrahydrocannabinol (delta8-THC) type – one identified

Cannabinol and cannabinodiol types – fully aromatic derivatives of THC and CBD respectively.

Other cannabinoids – **cannabicyclol type** (three known), **cannabinol type** (five known), **cannabitriol type** (nine known) and a miscellaneous type (eleven known).

Other components found in cannabis include, for example, terpenes (120 identified), hydrocarbons (50), sugars and related compounds (34), amino acids (18), flavonoids (21), steroids (11), and vitamins (1).

For further information, refer to this excellent reference book: [Cannabis and Cannabinoids - Pharmacology, Toxicology and Therapeutic Potential](#), Grotenhermen, Franjo, MD, and Ethan Russo, MD, Editors. 2002, The Haworth Press, Binghamton, NY. ISBN 0-7890-1508-0

VICS BBQ, October 2, 2005

All VICS members and friends are invited to our annual BBQ, noon, Mt. Douglas Park (beach access)

Medical Cannabis News:

Canada - Phytocan Gets Health Canada Approval

A new company called PhytoCan Pharmaceuticals has received approval from Health Canada to research and develop cannabis-based medicine. A spokesperson of the company said that they will do research over the next 12 to 18 months on whether the medicine should be a spray, liquid or solid and how to standardize the ingredients.

"Phytocan is the first company in Canada to develop a cannabis-based product," said operations manager Wendy Little. With the help of a local PhD specialist in plant extracts, whose identity cannot be revealed due to security issues, Phytocan will begin a 12- to 18-month initial phase to create a standardized product.

Geared toward specific conditions such as HIV, AIDS, multiple sclerosis, cancer and epilepsy, and pain management, the project will research different forms - specifically powder and liquid.

"Whatever the body can absorb as quickly as possible," said Phytocan president Eric Nash.

American's Bayer and GW Pharmaceuticals have released a liquid cannabis-based oral spray called Sativex into Canadian pharmacies, which will provide competition once Phytocan releases a product.

"Ours will be certified organic - different in that regard," said Nash, adding the marijuana source for Phytocan's research is Island Harvest, Nash and Little's organic facility for marijuana. Visit <http://www.medicalmarihuana.ca/phytocan/> for more info.

Source: Duncan News Leader, 09 Jul 2005.
<http://www.mapinc.org/drugnews/v05/n1110/a11.html>

VICS 2005 Annual General Meeting

The sixth VICS Annual General Meeting in July saw roughly 35 members, friends, directors and staff enjoy several hours together hearing the news, doing AGM stuff and munching some brownies. The last year has seen the VICS grow to nearly 500 members and we welcome Char, our newest staff member.

The board of directors remains the same by unanimous decision. The VICS is currently involved with three research protocols, one of which is involved with cannabis and chronic pain. The VITCRI trial will continue in the fall/winter 2005/6. Ed received Employee of the Year and Doug, Paul and Steph got certificates of appreciation. See you next year!

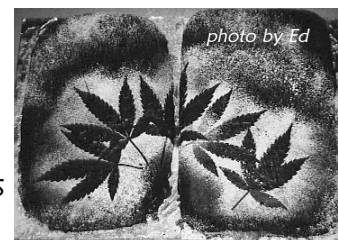


photo by Ed



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Science: Cannabis smoking does not cause cancer according to a case-control study

According to a case-control study by Dr. Donald Tashkin and his colleagues of the University of California in Los Angeles even heavy and longterm smoking of cannabis is not associated with lung cancer and other types of upper aerodigestive tract cancers.

The study included 1,209 residents of Los Angeles aged 18-59 with cancer (611 lung, 403 oral/pharyngeal, 90 laryngeal, and 108 esophageal). Interviewers collected lifetime histories of cannabis, tobacco, alcohol and other drug use, and data on other factors that may influence cancer risk, including diet, occupational exposures, and family history of cancer. Exposure to cannabis was measured in joint years (1 joint year = 365 joints). The cancer patients were compared to 1,040 cancer-free controls. Among the controls 46% had never used cannabis, 31% had used it for less than one joint year, 12% for 10-30 joint years, 2% for 30-60 joint years, and 3% for more than 60 joint years.

Compared with subjects who had used less than one joint year, the risk for lung cancer was 0.78 for 1-10 joint years, 0.74 for 10-30 joint years, 0.85 for 30-60 joint years, and 0.81 for more than 60 joint years. A risk below 1.0 means that the risk for cannabis users was slightly lower than for non-users. Similar results were obtained for the other cancer sites. There was no dose-response relationship of cancer risk, which means that there was no increased risks for more intensive users. The data on tobacco use, as expected, revealed a very potent effect and a clear dose-response relationship.

Source: Morgenstern H, et al. Marijuana use and cancers of the lung and upper aerodigestive tract: results of a case-control study. Presentation at the ICRS Conference on Cannabinoids, 24-27 June, Clearwater, USA

Science: Patients with inflammatory bowel disease may benefit from cannabinoids

Patients with inflammatory bowel disease may benefit from cannabis-based drugs, UK scientists believe. The Bath University team found an abundant number of cannabinoid-2 receptors in certain tissues of the intestine of patients. They believe this is part of the body's attempt to dampen down the inflammation and that giving a drug that binds to these receptors could boost this.

Dr. Karen Wright and colleagues examined gut samples from healthy people and patients with inflammatory bowel disease. CB1 and CB2 receptors were found in several tissues of the large intestine of both groups. However, the patients had far greater numbers of CB2 receptors in the epithelium characteristic for the disease. Activation of the CB2 receptors by cannabinoids enhanced healing of the tissue. This observation provides a rationale for the treatment of inflammatory bowel diseases such as Crohn's disease and ulcerative colitis with cannabis products.

When people have inflammatory bowel disease their immune system produces inflammation in different areas of the digestive tract. This causes symptoms such as pain and urgent diarrhoea.

Anecdotally, people with Crohn's disease and ulcerative colitis have reported that their symptoms get better when they use cannabis. First clinical trials with cannabis extracts in Crohn's disease are under way by the University of Munich (with Cannador) and by the British firm GW Pharmaceuticals (with Sativex).

Sources: BBC News of 31 July 2005; Wright K, Rooney N, Feeney M, Tate J, Robertson D, Welham M, Ward S. Differential expression of cannabinoid receptors in the human colon: cannabinoids promote epithelial wound healing. *Gastroenterology* 2005;129(2):437-53

Science: News at the 2005 ICRS Conference

This year's conference of the International Cannabinoid Research Society (ICRS) was held on 24-27 June in Clearwater, Florida. About 300 scientists attended the meeting. Some abstracts are presented in brief below.

(1) Neuropathic pain: Preliminary results of a randomized, placebo-controlled study involving 50 patients with HIV-related peripheral neuropathy who received either smoked cannabis or placebo-cannabis were presented. In the study conducted at the University of California cannabis was shown to provide pain relief comparable to Gabapentin, the most widely used treatment for a condition that afflicts some 30% of patients with HIV.

(Abstract by D. Abrams et al.)

(2) Schizophrenia: Results of a four-week double-blind clinical trial on cannabidiol and amisulpride in acute schizophrenia were presented by researchers of the University of Cologne.

Cannabidiol significantly reduced psychopathological symptoms of acute psychosis after both, week two and four, when compared to the initial status. There was no significant difference in efficacy between cannabidiol and amisulpride. However, cannabidiol caused significantly less side effects than the other drug. (Abstract by M. Leweke et al.)

(3) Withdrawal: Abrupt interruption of one year of treatment with the cannabis extract Sativex was not associated with a withdrawal syndrome or serious withdrawal symptoms in 25 patients with multiple sclerosis. About half of the patients experienced symptoms previously reported in connection with withdrawal from regular use of recreational cannabis.

(Abstract by E. Russo & P. Robson)

(4) CB2 receptor in the brain: Research in mice was presented that demonstrated the presence of the CB2 receptor in the brain. Their number was enhanced by chronic mild stress (CMS). These results suggest that CB2 receptors are expressed in the mammalian brain and may play a role in depression. (Abstract by E. Onaivi et al.)

(5) Amyotrophic lateral sclerosis (ALS): A synthetic cannabinoid (AM1241) that selectively binds to the CB2 receptor was shown to slow disease progression in a mouse model of ALS. Loss of motor function was delayed by 12.5 days in male mice and by 3 days in female mice. (Abstract by M. Abood et al.)

Source: Reader of the 2005 ICRS meeting, www.cannabinoidsociety.org.

Science: Cannabis and driving

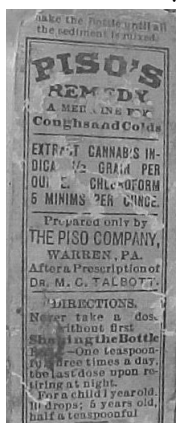
Canadian researchers of the University of Victoria investigated the question whether clients in treatment for problems related to the use of alcohol, cannabis, cocaine, or various combinations of these substances, had a higher risk to drive while impaired compared to a control group. 445 drivers under treatment were included. In the 8 years before treatment, every drug group except the "cannabis only" group had significantly more convictions for driving while impaired than controls.

Source: Macdonald S, et al. *Traffic Inj Prev* 2005;6(3):207-11.

Science: Sublingual bioavailability of THC

Novel cyclodextrin-containing sublingual formulations of cannabinoids were developed by Finnish researchers. By adding cyclodextrin to THC or CBD their solubility in water was considerably increased. Sublingual administration of a THC/cyclodextrin complex substantially increased the bioavailability of THC in rabbits.

Source: Mannila J, et al. *Eur J Pharm Sci* 2005 Jun 12



Health Canada's Revised Website:

If you're looking for the latest info about the federal Medical Marihuana Access Regulations (MMAR), visit:

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

MMAR Interpretation:

Interpretation of something can be as varied as the minds at work. Take for example the latest regulations from Health Canada regarding the medical cannabis program (MMAR). These were summarized in our last issue (Vol#2, Issue #11). One part that has created comment and discussion among patients and growers alike is section **D7 Authority to Communicate to Canadian Police**.

Previous regulations gave a choice to someone growing cannabis whether their personal information could be forwarded to police or not. The intention is to reduce the possibility of police intervention when licence holders are engaged in activities allowed under their licence. The new regulations do not provide a choice and it reads as:

“To reduce the possibility of police intervention when you engage in activities allowed under your licence, Health Canada will communicate limited licence information to Canadian police in response to a request received from Canadian police in the context of an investigation under The Controlled Drugs and Substances Act or the Medical Marijuana Access Regulations.”

One interpretation by stakeholders is that this section is a violation of privacy rights by requiring mandatory disclosure of personal information. However, some have stated that they are more comfortable with the new wording and have no problem with the section provided access to information is not abused. One grower felt that it was worded in such a manner that s/he would be more comfortable applying than previously even though information disclosure is mandatory. What do you think?

Vioxx Decision:

A Texas jury found pharmaceutical giant Merck & Co. liable in August for the death of a man who took the once-popular painkiller Vioxx, awarding his widow \$253.4 million in damages in the first of thousands of lawsuits pending across the US. The damage award is likely to be drastically cut to no more than \$26.1 million because Texas law caps the punitive damages.

The jury found Merck to have acted with malice, which is a cut below negligence on the sliding scale of responsibility. They rejected Merck's argument that Robert Ernst, 59, died of clogged arteries rather than a Vioxx-induced heart attack that led to his fatal arrhythmia. Early clinical trials had alerted Merck executives to the fact that Vioxx caused coronary damage. Their response was to exclude from future trials anyone with a history of heart trouble. Once Vioxx was on the market, Merck suppressed indications that it was causing strokes and heart attacks at twice the normal rate in people who used it for 18 months or more. Merck pulled the drug, a \$2.5 billion seller, from the market in September 2004. (David Graham, MD, of the FDA, has projected 55,000 deaths and 85,000 disabling injuries from Vioxx.)

Merck, which previously vowed to fight the more than 4,200 state and federal Vioxx-related lawsuits one by one pending across the country, says it may consider settling some lawsuits.

Source: CBS News, www.cbsnews.com/stories/2005/08/19/health/main788619.shtml

The Centre of Addictions Research of BC is hosting a free lecture at 5:00 pm, Sept. 15, 2005, at David Strong C103, University of Victoria, with discussions by two prominent US drug policy experts. Ethan Nadelmann, Executive Director of Drug Policy Alliance, will speak on the methamphetamine crisis, and Martha Rosenbaum, Director of Drug Policy Alliance, will talk about teenagers, drugs and drug information. Call 472-5445 for info.

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

askmat@hotmail.com

'Cannabis Yields and Dosage' in the Garden:

The US Supreme Court decision in May 2005 notwithstanding, ill people in America are still ingesting cannabis for medicinal purposes. In California, Proposition 215 has permitted the possession of and/or growing of cannabis for medical purposes upon the approval of a physician since 1996. While there are areas of debate, a key question was left unresolved: how can one tell if a cannabis plot is reasonably related to the medical needs of the patient?

A booklet out of California, titled “*Cannabis Yields and Dosage – The Science and Reason Behind the Safe Access Now Medical Marijuana Garden Guidelines*” (July 2004) seeks to answer this question using a plant canopy area calculation. Put simply: “100 square feet (10 square metres) of outdoor mature garden canopy will typically yield three pounds (1.4 kg.) of processed bud per year, a common amount for daily-use patients.” The formula was developed in 1992 by the US Drug Enforcement Administration and published in “*Cannabis Yields*”, and forms the basis of what is now known as Safe Access Now guidelines (up to 3 pounds of cannabis and 100 square feet of canopy per patient.) 3 to 5 joints a day translates into roughly 3.25 pounds per year; if eaten, it is estimated that roughly three to five times the amount is required.

The canopy area formula eliminates the need to allocate plant numbers, as a grower will increase or decrease the number of plants accordingly to stay within the allowable canopy area per person. Presently, California Senate Bill 420, HS11362.7, limits the number of plants to six mature or 12 immature plants plus eight ounces of dried bud. For many patients needs, these numbers are inadequate and the booklet provides a good argument to raise these limits and/or recognize the canopy area formula as an appropriate model.

The term ‘canopy’ is used in agriculture to describe the foliage of growing plants. The area shaded is called its canopy cover. Test data shows that on average each square foot of mature, female outdoor canopy yields less than a half-ounce (14 grams) of dried and manicured bud. All things being equal, a large filled-in garden canopy will always yield more than a small one, regardless of the number of plants it contains.

The balance of the booklet discusses legal issues surrounding medical cannabis in California.

The booklet was written by Chris Conrad and updates are available online at www.chrisconrad.com or www.safeaccessnow.net.

Definitions:

bully *n.* a person who uses strength or power to coerce others by fear; (archaic) pimp; bully(-boy), hired ruffian [originally as term of endearment, probably from Middle Dutch *boele lover*] (The Concise Oxford Dictionary, 7th ed., 1983)

gnosis *n.* knowledge of spiritual mysteries. [from Greek *gnosis* knowledge] (ibid.)

interpret *n.* expound the meaning of (abstruse or foreign words, writings, dreams, etc.); make out the meaning of; bring out the meaning of, render, by artistic representation or performance; explain, understand in specified manner (we interpret this as a threat) [Middle English, from Old French *interpreter* or from Latin *interpretari* explain, translate] (ibid.)

pharmacognosy *n.* the branch of pharmacology that deals with drugs in their crude or natural state and with medicinal herbs or other plants. [pharmaco- + Greek *gnosis*, knowledge] (The American Heritage Dictionary of the English Language, Fourth Edition, Updated in 2003)

Marc Emery Arrested; BCMP Office Raided:

Canadian police acting under orders from DEA officials of the United States raided the headquarters of the British Columbia Marijuana Party (BCMP) and Marc Emery's seed business in Vancouver on July 29 and arrested Gregory Keith Williams and Michelle Rainey-Fenkarek, alleged to be Emery's business partners. Marc Emery, leader of the BCMP and who was referred to as the "Prince of Pot" on the search warrant, was arrested in Halifax the same day. He is charged in the US with conspiracy to distribute marijuana, conspiracy to distribute marijuana seeds, and conspiracy to engage in money laundering.

The search warrant included all records pertaining to the seed-selling business, Marc Emery Direct, including client lists, invoices and employee records from as far back as September 1995. The search was requested by the US government through the Mutual Assistance in Criminal Matters Act, Canadian legislation that was enacted in 1985. While selling marijuana seeds is also illegal in Canada, no one has been arrested for years.

The US is now seeking their extradition. September 16 has been set as the first hearing date and it is estimated that the case could be from six months to two years long. However, Kirk Tousaw, Campaign Manager of BCMP, points out that the justice minister must refuse to surrender Emery, Rainey-Fenkarek, and Williams if it appears that the US prosecution is politically motivated.

"When one considers that there are literally dozens of seed sellers operating on the Internet and in retail locations in Vancouver and elsewhere in Canada, yet the DEA only targeted Emery, the conclusion that this is a political persecution is inescapable," Tousaw stated in a letter.

Thanks goes to Storz-Bickel for the Volcano, a solid, durable and easily operable vaporizer, and for their prompt service.
Thanks Doug for the woodworking. PEACE
Check out our advertisers below.

Guy Caron, a specialist on Canada-US relations with the Council of Canadians, says it's the first time he's heard of a Canadian being arrested by Canadian law enforcement at the request of the US for an infraction committed on Canadian soil. He poses an interesting mental exercise.

"Try to see what would happen if we were to turn the case around," he says. "Let's say the Canadian government wanted to extradite a US citizen who is peddling hate-mongering documents in Canada through the Internet - white supremacy, anti-Semitism or anything else against Canadian hate laws. Do you think the US would agree to extradition for this citizen to face charges in Canada? Of course not. I personally would be very shocked if the extradition goes the US way."

Emery's lawyer John Conroy said the case against him is unfair because Canadian police have never charged him while he openly sold seeds for nine years. "Even Health Canada was directing people to online websites like Mr. Emery's to buy seeds. And now they're helping the Americans," he said at a news conference.

On August 2 Justice Patrick Dohm allowed Emery to go free on \$50,000 bail. He could face life in jail if convicted in the US. Emery said he's been selling his marijuana seeds for 11 years, during which time Canadians have benefited from the \$4 million he's given away to various organizations.

"Everybody took the money, from the income tax departments representing the province and the federal government (over \$600,000)," said Emery. "I've never received a written complaint or a phone call in 11 years and I have a listed phone number. So if I get taken away for the rest of my life to a United States prison then every Canadian has let it happen because they have tacitly and complicitly (sp.) condoned my behaviour."

Sources: Cannabis Culture 29 July 2005, Windsor Star 30 July 2005, Canadian Press 2 August 2005, Vancouver Courier 08 Aug 2005, Times-Colonist 26 Aug 2005



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<http://thecompassionclub.org>

DrugSense

<http://www.drugsense.org>

Canadians for Safe Access

<http://www.safeaccess.ca>

Canadian Cannabis Coalition

www.cannabiscoalition.ca

Canada Medical Marijuana

www.medicalmarijuana.ca

Media Awareness Project

<http://www.mapinc.org>

Action Committee of People with Disabilities

383-4105

Health Canada

http://www.hc-sc.gc.ca/dhp-mpps/marijuana/index_e.html
1-866-337-7705

Norml Canada

<http://www.normlcanada.org>

Cannabis Health

<http://www.cannabishealth.com>

Cannabis Research Institute

<http://www.cannabisresearchinstituteinc.com>

"If we could read the secret history of our enemies, we would find in each person's life sorrow and suffering enough to disarm all hostility." -- Henry Wadsworth Longfellow