

# Choosing cannabis for pain control



Dr. Ethan Russo on Cannabis and Pain

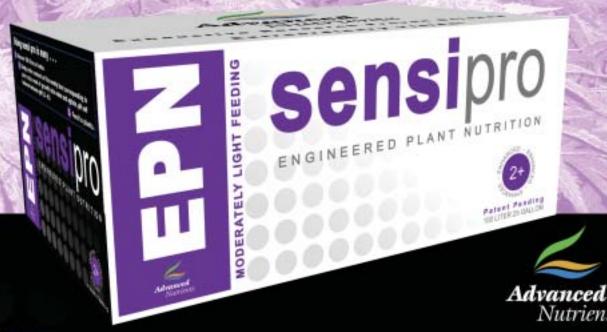
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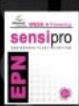
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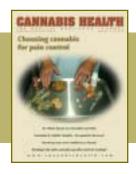
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#### www.cannabishealth.com

Visit our website at cannabishealth.com for extended versions of the stories and links to information and resources.

## The Cannabis Health Foundation was formed in the spring of 2002 as a non-profit foundation.

The foundation is dedicated to:

- · Promoting the safe medicinal use of cannabis.
- · Research into efficacy and genetics of cannabis.
- Supporting and protecting the rights of the medical cannabis users.
- Educating the public on cannabis issues.

The first initiative of the foundation is this complimentary hard copy publication of *Cannabis Health*.

Other activities will include financial and practical support for low income patients and the establishment of a legal defense fund. The free hard copy of *Cannabis Health* is also reproduced in whole on the World Wide Web at cannabishealth.com (the foundation website) with extended stories and hot links to resources and information.

#### SUBSCRIPTION INFORMATION

If you would like to receive 6 copies per year of the most informative resource for medical marijuana available, subscribe to *Cannabis Health* by sending your name and address and a cheque to Cannabis Health Foundation, P.O.Box 1481, Grand Forks, B.C., VOH 1HO (USA send CAN\$45.00cdn and foreign send \$75.00cdn)

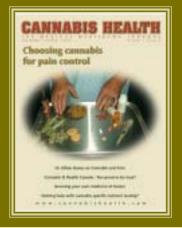
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#### **NOTE:**

We sincerely apologize to Dr. Willem Scholten from the Office of Medical Cannabis in the Netherlands, and to Ms. Fran Klass from the Drug Information Journal who holds the copyright. In edition #4 on Page 14, in the article, "Licensing in The Netherlands" by Allen Town, quotes were taken from the article "Dutch Measures To Control Medical Grade Marijuana: Facilitating Clinical Trials", by Willem Scholten (Drug Information Journal, Vol. 35, pp. 481–484, 2001) and we did not interview Dr. Scholten, nor give proper credit to Drug Information Journal.

#### COVER



This issue's cover touches a personal cord with us at Cannabis Health.

From time to time some have found it an effective addition, if not complete pain relief alternative.

# THE TRUTH IS

Marijuana IS NOT more harmful to the lungs than cigarettes.



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Brian Taylor Editor-in-Chief

In this issue CHJ covers one of the most important medical and ethical issues of the century, an emotional battle ground of conflicting beliefs, the topic of pain. We have chosen to take a

substantial journalistic risk and publish an edited, and slightly modified version of a "White Paper" by Dr. Ethan Russo. Although substantially shorter, the content has been retained. We have not tried to change the scientific language and we are convinced that our cannabis consuming readers will make sense of the report regardless of whether they understand every medical term or not. We hope and expect our readers will keep this edition as a reference document and possibly share it with their physicians.

Our gratitude to Dr. Russo for sharing this risk and for making available to our readers and to the general public, this timely and concise information. Working with our advertisers and writing the article on home growing options in "Growing your own medicine at home", I was struck by several commonalities. They are owner-operators, hands-on with products and

involved with their customers and suppliers; your basic grass roots entrepreneurs. They are optimistic, creative and talented and have a long-range vision of the future of the industry, some have gotten there a bit early, some are new, some are survivors from the hemp movement. Watch out when they get organized and look out for Canada's newest trade association, the Cannabis Bio-products Trade Association coming to your province soon.

Interesting reaction from the US over the Canadian Government same sex marriage decision, and the pot law changes, after we refused to go to war. Is the philosophical gap widening, are we truly the new "hippie nation"? The Bush Administration and the new drug Czar, Karen Tracy continue to search for new ways to undermine the authority of California and other states that have approved the use of medical marijuana, and now in a new offensive are seeking the power to investigate physicians who advised seriously ill patients that medicinal marijuana may be a legitimate treatment for debilitating illness. As discouraging as it may be to watch the second US civil war unfold, I am heartened by two events. The first was a recent vote in congress that would have ended the attack on the State medical marijuana movement. The vote was lost 152 to 273, but the movement was substantial. The debate that followed was as interesting, as some of the "nays" admitted that they were voting against the bill not because they did not support the medical user, but because their constituents would not be comfortable. At least this was acknowledging that the vote was cultural political, not scientific. The other event, not to be overlooked, was a report from the International Cannabinoid Symposium held in Canada in June. Participants reported a new, more positive attitude. No longer was the DEA asking science to find the damage that marijuana is wreacking and researchers were more open-minded and even enthusiastic over identifying the positive impacts of the plant. Finally on a hemp note. Recently Jason Finnis, Hemptown's chief operating officer announced that he is looking to raise \$25 million to build mills in Canada and a market for fabric-grade hemp, which he is now forced to buy in China. The reception that Jason received from the same experts was at best reserved. Well, let me change that reception. You have my personal support and that of many other Canadians. Indeed a Canadian fabric operation is possible and economically viable. Are they unaware that this is the guy who bounced back and has made his hemp company Hemptown a "dizzying success"? Yes you can, Jason! \*\*

#### LETTERS

#### **Professional compliment**

"Congratulations to Matt Elrod for his concise article in the May/June issue of Cannabis Health. As someone with extensive first-hand knowledge of both HortaPharm and GW Pharmaceuticals, I can attest to the accuracy of the story, and applaud his balanced and distinctly unsensational presentation of the issues. Consistent journalism of this caliber will serve to promote your magazine as a publication of serious intent."

David W. Pate, Ph.D., M.Sc.

#### I'm productive now!

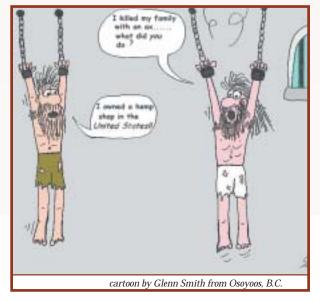
This is just a quick letter to say two things. Firstly, I love your magazine. Second, referring to issue #4, the article on GW Pharmaceuticals.

I was addicted to heroin, then I put

myself on Methadone. I must just say that marijuana is the ONLY way I was

able to succesfully get off Methadone. The sweating disappears, the stomach settles, and your appetite comes back. I only smoke pot now, and will do so forever. It honestly saved my life, and I believe it still is! Also, I found that smoking oil was the complete "cure" for withdrawals. I found your article so interesting, I faxed copy to my old "methadone" doctor.

I am today a productive gardener and a student and I am very interested in the work that GW Pharmaceuticals does. Any follow-up articles would be great. KEEP UP THE GOOD WORK! Thanx - Carol





# Representatives of the "Hippie Nation"

From left to right-

Gordon Taylor - Librarian

Brian Taylor - Editor,

**Brian McAndrew - Production** 

Glenda Hordos - Store Manager

**Barb Cornelius - Accounting** 

Lisa Smith - Sales

Mandy Nordahn - Distribution

#### The Hippie Nation Invites...

Hello from business-friendly B.C. Canada. The staff of Cannabis Health Journal and Cannabis Research Institute are ready to help your company find a home here in the beautiful Kettle River Valley or any other part of our fair nation.

The Hippie Nation, Land of the Free, Canada.

#### **Grow Seminars Available**

Cannabis Health Foundation in partnership with Cannabis Research Institute, employees, volunteers and friends offer the seminar series "Growing a personal supply of cannabis at home".

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The presenters are experienced, well seasoned, entertaining, fun and informative. Presentations include lecture, power

point, hands-on learning, and demonstrations. Where possible, real cannabis plants will be included in the sessions. Cannabis is a fascinating phenomenon in today's culture. The Cannabis Health sessions are ideal for groups interested in learning how cannabis is grown.

For bookings and information call Cannabis Research Institute Inc. Toll free at 1-866-808-5566 and ask for Brian Taylor



Brian McAndrew Production Manager

#### **Production Notes**

Here we are at the end of our first year and the Journal has gone through quite an evolution in content and design. It has been the job of the editor to make sure that what you are reading is going to capture and keep your interest, with the sales people finding the financial support through the advertisers.

My job as production guy is to take the stories that our editor gathers, take the ads that the sales team gathers, (some come in "camera ready" and others I design) and lay it out in a way that everyone likes. It has to reflect the content of the stories as well as everyone else's wishes. We all discuss the kind of things we want the cover and content to reflect, and then it is up to me to do the rest.

Since the first edition and in every one of them since, we have been incorporating small changes to help make the magazine more appealing visually as well as easy to read. It also has to keep up with the dynamic nature of the cannabis issue. Some things go in at the last minute. One thing we do is to try and keep all the stories in a continuous format to keep you from jumping all over the place to finish a story. It is impossible to do it all the time, though. We play with picture and colour to make it more visually appealing. These small changes help us improve the quality of the

Journal in either content, design, or both. These changes have been made with an evolutionary reaction to our readership and advertisers.

It is with this in mind that I get to be the one to announce a new cover design for our First Anniversary Issue, #7, November/December - the next one. Not only a new cover, but a whole new look and feel for our website at cannabishealth.com.

We have been maturing and feel this new look and feeling with the cover and web will reflect the way we have evolved in this first year.

I must say that I get a lot of freedom to be able to create and do my thing., I even get to write sometimes, but I don't get my way all the time. Among other things, I wanted to have a different pic for the one above and I was out voted...unanimously... oh well, win some - loose some.\*\*

The following article is an edited composite of a Policy Paper on Cannabis in Pain Treatment presented to the American Academy of Pain Management by Dr Ethan Russo, MD



Dr. Ethan Russo

#### Effective treatment

of acute, chronic and intractable pain is a critically important public health concern in the world today. Despite a vast array of analgesic medicines including anti-inflammatory and opioid analgesics, countless patients continue to suffer the burden of unrelieved pain. Opiate addiction, and the recent OxyContin® controversy underline the importance of newer effective and safe alternatives.

For over a century, international commissions have studied the issue of cannabis, and virtually uniformly recommended its decriminalization and provision for medical applications, specifically including the treatment of pain.

Cannabis has been employed as an analgesic for thousands of years, and was utilized in this country as well, particularly for neuropathic pain, prior to its effective removal from the American market 65 years ago. Historical cannabis supporters have included such physicians and scientists as Galen. Dioscorides, Parkinson, Linnaeus, Gowers, Weir Mitchell, Osler, Solomon Snyder, and many others. Cannabis remains a frequently employed ethnobotanical agent in pain management among indigenous peoples of the world.

Modern research on endogenous cannabinoids and the cannabinoid receptor system has demonstrated a scientific basis for the efficacy of synthetic and phytocannabinoids in pain management based on serotonergic, dopaminergic, Substance P, and glutamatergic mechanisms, interactions with the endogenous opioid system, as well as antioxidant and anti-inflammatory effects. These mechanisms have been demonstrated in both central and peripheral systems. Adjunctive effects of cannabis and cannabinoids on depression, anxiety, spasticity, tremor, nausea and anorexia also contribute to treatment benefits in chronic pain patients. Whole cannabis and its extracts provide an entourage of cannabinoids, terpenoids, and flavonoids that combine to create a synergy of benefits in holistic treatment of chronic and intractable pain.

Systematic examination of the toxicology and side effect profile of cannabis and cannabinoids on long-term cognitive, other nervous system, endocrine, hematological, and immunological function demonstrate little documentation of significant detrimental effects, and suggest a safety margin well within that of most prescription medicines. The sole area of demonstrable concern surrounds chronic pulmonary issues attendant with smoked cannabis. These problems are possibly avoidable with harm reduction techniques such as vaporization, and are totally so with alternative delivery methods such as sublingual or nebulized cannabisbased medicine extracts. Fears of cannabis-induced psychosis, addiction, and cognitive impairment and deterioration have been largely exaggerated.

Oral synthetic THC (Marinol®), a synthetically derived THC dissolved in sesame oil, was developed by Unimed Pharmaceuticals. It is available in capsules of 2.5, 5 and 10 mg and is marketed in the USA, Canada, Australia, and some areas in Europe, and has proven quite disappointing as a pain management tool. Cannabis proper, and a variety of synthetic agents are in various stages of clinical investigation. Development and FDA approval of synthetic cannabinoids will require many years. In contrast,

cannabis-based medicine extracts have proven safe and effective in a large variety of pain conditions, and are expected to attain governmental regulatory approval in the UK, Western Europe and Canada within a very short time.

# The History of Cannabis in Pain Management

Traditional knowledge of cannabis in China may span 5000 years, dating to the legendary emperor, Shên-Nung. Julien (1849) wrote of the physician Hoa-tho in the early 2nd century and his use of a cannabis extract in anesthesia for major surgical procedures.

The Atharva Veda of India (dating to between 1400 and 2000 BCE) mentions a sacred grass for anxiety, bhang, which remains a modern term for cannabis. Medical references to cannabis date to Susruta in the sixth to seventh centuries BCE. Dwarakanath (1965), described a series of Ayurvedic and Arabic traditional preparations containing the herb indicated for migraine, neuralgic and visceral pains.

Similar proof of the medicinal use of cannabis exists in records and artifacts from ancient Egypt, Assyria, Israel/Palestine/Judea, and the Greek and Roman Empires.

In common use throughout the Medieval world and Renaissance Europe, the medical use of cannabis, or "Indian hemp" was reintroduced to the West by O'Shaughnessy (1838-1840). His treatise on the subject dealt with the apparent utility of a plant extract administered to patients suffering from rabies, cholera, tetanus, infantile convulsions, but also a series of painful rheumatological conditions. Of particular note, even patients that succumbed to their illnesses were greatly relieved by cannabis with convincing palliative benefits.

Shortly thereafter in England, Clendinning (1843) described his results of treatment of 18 patients: 3 with headaches, one with abdominal pain secondary to tumor, one with pain secondary to a laceration, two with rheumatic joint pain, and one with gout. In each case, the tincture of Indian hemp provid-

ed relief, even in cases of morphine withdrawal symptoms.

In Ireland, Donovan (1845) extensively described his own extensive trials with small doses of cannabis resin, mainly in patients with various types of neuropathic and musculoskeletal pain. Effects were almost uniformly impressive, with few side effects. He also described the benefits of local application of hemp leaf oil on hemorrhoids and neuralgic pains.

Over the next decades, numerous authorities recognized cannabis as helpful for painful conditions. Sir John Russell Reynolds was eventually to become Queen Victoria's personal physician. He successfully treated her dysmenorrhea with a cannabis extract throughout her adult life (Reynolds 1868) and used it extensively to treat migraine and neuropathic pain.

Hobart Hare (1887): I have found the efficient dose of a pure extract of hemp to be as powerful in relieving pain as the corresponding dose of the same preparation of opium.... During the time that this remarkable drug is relieving pain a very curious psychical condition sometimes manifests itself; namely, that the diminution of the pain seems to be due to its fading away in the distance, so that the pain becomes less and less, just as the pain in a delicate ear would grow less and less as a beaten drum was carried farther and farther out of the range of hearing.

In the French literature, Sée (1890) submitted a detailed report on use of cannabis in the treatment of various disorders producing gastric and intestinal pain, and found it preferable in efficacy and side effects to opiates and bismuth.

Suckling (1891) noted the ability of cannabis to allow migraine sufferers to return to work.

An American drug handbook stated the following: (Lilly, 1898) "Antispasmodic, analgesic, anesthetic, narcotic, aphrodisiac. Specially recommended in spasmodic and painful affections."

Hare (1922) still advocated use of cannabis noting "For the relief of pain, particularly that depending on nerve disturbance, hemp is very valuable."

An editor of the Journal of the American

Medical Association, as late as 1930 noted the ability of cannabis to achieve a labor with pain burden substantially reduced or eliminated, followed by a tranquil sleep (Anonymous 1930) without sequelae.

Despite its political disenfranchisement, Fishbein (1942) still advocated oral preparations of cannabis in treatment of menstrual (catamenial) migraine.

Cannabis remained in the British armamentarium somewhat longer, and was extolled above opiates and barbiturates in the treatment of the pain of hospitalized patients with duodenal ulcers (Douthwaite, 1947).

In Tashkent in the 1930's, cannabis or nasha was employed medicinally, despite Soviet prohibition (Benet 1975) for headache and pain of defloration. In

Southeast Asia, cannabis remains useful (Martin 1975). Everywhere it is considered to be of analgesic value, comparable to the opium derivatives.

Moreover, it can be added to any relaxant to reinforce its action. Cooked leaves, which have been dried in the sun, are used in quantities of several grams per bowl of water. This decoction helps especially to combat migraines and stiffness.

In a book about medicinal plants of India (Dastur, 1962)

Charas [hashish] — is a valuable narcotic, especially in cases where opium cannot be administered; it is of great value in malarial and periodical headaches, migraine, acute mania, whooping cough, cough of phthisis,

asthma, anaemia of brain, nervous vomiting, tetanus, convulsion, insanity, delirium, dysuria, and nervous exhaustion; it is also used as an anaesthetic in dysmenorrhea, as an appetizer and aphrodisiac, as an anodyne in itching of eczema, neuralgia, severe pains of various kinds of corns, etc.

In Colombia the analgesic effects of a cannabis tincture were lauded (Partridge 1975) "the knowledge that cannabis can be used for treatment of pain is widespread." Rubin documented extensive usage of cannabis in Jamaica for a variety of conditions (Rubin, 1976; Rubin and Comitas, 1972), including headache.

In Brazil, Hutchinson (1975) "Such an infusion [of leaves] is taken to relieve rheumatism, "female troubles", colic and other common complaints. For



toothache, marijuana is frequently packed into and around the aching tooth and left for a period of time, during which it supposedly performs an analgesic function.

#### Cannabis and Cannabinoids as Medicine. Cannabis Proper

Cannabis is traditionally employed therapeutically by smoking or ingestion. Grotenhermen has produced an excellent summary of "Practical Hints" (Grotenhermen, 2002), as have Brazis and Matthre (1997) and Russo (2002).

Dosing of therapeutic cannabis must be titrated to the patient's need. In general, 5 mg of THC content represents a threshold dose for noticeable effects in the average adult (Grotenhermen 2002). Whereas tolerance to cardiovascular effects (tachycardia) and psychoactive effects ("high") are achieved after some days to weeks of chronic usage, observed clinical and "anecdotal" reports support retention of analgesic efficacy over the long term. Occasionally, upwards dose titration is necessary, as is true for any agent.

Allergies to cannabis are rare, although some may experience rhinitis symptoms, particularly when exposed to the smoke of the unrefined product. People employing cannabis therapeutically must be warned of the usual caveats assigned to any potentially sedative drug: due care with operation of machinery, motor vehicles, etc., which are analogous to the industry warnings



for Marinol® (synthetic THC).

Acute over-dosages of cannabis are self-limited, and most frequently consist of panic reactions. These are uniquely sensitive to reassurance ("talking down") and are quite unusual once a patient becomes familiar with the drug. Cannabis has a unique distinction of safety over four millennia of analgesic usage: No deaths due to direct toxicity of cannabis have ever been documented in the medical literature.

Some cannabis-drug interactions are apparent, but are few in number. Additive sedative effects with other agents, including alcohol, may be observed. Similarly however, additive or synergistic anti-emetic and analgesic benefits may accrue when combining dopamine agonist neuroleptics and cannabis (Carta, Gessa, and Nava 1999). Cannabis may accelerate metabolism of theophylline, while slowing that of barbiturates. Anticholinergicinduced tachycardia may be accentuated by cannabis, while this effect is countered by beta-blockers (Grotenhermen 2002). Indomethacin seems to reduce slightly the psychoactive and tachycardic effects of cannabis (Perez-Reyes et al. 1991). As discussed above, synergistic analgesic benefits may accrue with concomitant usage of cannabis and opioids (Cichewicz et al. 1999; Hare 1887). CBD is a powerful inhibitor of cytochrome P450 isozymes 3A4, 2C19, and 2D6 (Bornheim et al. 1994; Bornheim and Grillo 1998) indicating the need for caution in cannabis patients taking that component in conjunction with fentanyl, sildenafil (Viagra®), tricyclic antidepressants and anti-arrhythmic drugs.

Crude cannabis contains most of its THC in the form of delta-9-THC acids that must be decarboxylated by heating to be activated. This occurs automatically when cannabis is smoked, whereas cannabis that is employed orally should be heated to 200-210 °C. for 5 minutes prior to ingestion (Brenneisen 1984).

Contrary to disseminated propaganda in the USA, average cannabis potency has varied little over the last 3 decades (ElSohly et al. 2000; Mikuriya and Aldrich 1988). It is true that the maximum potency has increased through applied genetics, cultivation and harvesting techniques. This goal is achieved through production of clonal cultivation of the preferred female plants and maximization of the yield of unsterilized flowering tops

known as sinsemilla (Spanish for "without seed"). In this manner a concentration of glandular trichomes where THC and therapeutic terpenoids are produced is effected. Resultant yields of THC may exceed 20% by weight. This is potentially advantageous, particularly when smoked, because a therapeutic dosage of THC is obtained with fewer inhalations, thereby decreasing lung exposure to tars and carcinogens. As noted by Professor Wayne Hall (Lords 1998).

Indeed, it is conceivable that increased potency may have little or no adverse effect if users are able to titrate their dose to achieve the desired state of intoxication. If users do titrate their dose, the use of more potent cannabis products would reduce the amount of cannabis material that was smoked, thereby marginally reducing the respiratory risks of cannabis smoking.

A considerable concentration of THC, other cannabinoids and terpenoids may also be achieved through some simple processing of crude dried cannabis. Techniques for sieving or washing of cannabis to isolate the trichomes to produce hashish are well described (Clarke 1998; Rosenthal, Gieringer, and Mikuriya 1997), and may produce potential yields of 40-60% THC. Clarke demonstrates a simple method of rolling the resultant powdery material into a joint of pure hashish, termed "smoking the snake" (Clarke 1998), providing a relatively pure product for inhalation.

Cultivation techniques are beyond the scope of this review, but emphasis should focus on potent medicinal strains, scrupulous organic cultivation of female plants, clonal selection and augmentation, and appropriate processing with a high degree of quality control throughout the process. It deserves emphasis that clinical cannabis patients benefit from consistent quality and dosing. This is extremely difficult to achieve on a practical basis, unless cloned cannabis strains or standardized extracts are employed. Additionally, although cannabis is often touted as relatively "pest-free," it is subject to predation by a number of insects, bacteria, viruses, fungi, etc. (McPartland, Clarke and Watson 2000).

Cannabis strains in the USA are THC predominant, almost uniformly devoid of CBD content (Gieringer 1999). While this may be appropriate for certain medical conditions, patients with concomitant

muscle spasm, anxiety, seizure disorders, or susceptibility to psychoactive effects may not achieve optimal results.

The labor required to manage cannabis genetics, culture, maintenance of "organic" technique without contamination, processing and quality control are likely beyond the ken and capabilities of most patients, particularly those with chronic pain.

It remains the case that smoked cannabis is a crude delivery system with some inherent respiratory risk. This fact, taken with the inability to develop smoked cannabis into an FDA-approved medicine in the USA, makes the development of alternative rapid-delivery cannabis-based systems mandatory.

#### Oral use of cannabis

A variety of issues attend oral cannabis administration. The most important concerns bioavailability. Oral absorption of cannabinoids is slow and erratic at best, often requiring 30-120 minutes. In HIV positive or chemotherapy patients and in acute migraine, nausea and emesis may preclude oral usage altogether. Additionally, oral THC is subject to the "first pass effect" of hepatic metabolism yielding 11-hydroxy-THC, considerably more psychoactive than THC itself. Thus, some patients become "too high" even on low doses of medicine, such as 2.5 mg of THC as dronabinol.

Advantages of oral usage are its avoidance of lung exposure in those who are immunosuppressed or have impaired pulmonary function, and its prolonged half-life. This may be of advantage for nocturnal complaints where sedation is less of an issue.

Grotenhermen suggests dose titration beginning with the equivalent of 2.5 mg of oral THC bid with increases as needed and tolerated (Grotenhermen 2002). Most painful clinical conditions require tid dosing of cannabis.

THC, CBD and terpenoids are all highly lipophilic. Gastrointestinal absorption is markedly enhanced by inclusion of lipids in the cooked preparations. Therapeutic tincture extraction in alcohol is also possible.

#### Smoked cannabis

Techniques of smoking cannabis are legion. Pharmacodynamically, smoking would be an ideal method of application of clinical cannabis, but for the attendant pulmonary issues. Clinical effects are noted within seconds to minutes after smoking. Inhalation avoids the first pass effect that ham-

pers oral use, and allows effective dosage titration. When symptoms return, repeat dosage is achieved quickly and easily. Overdosage is frequently avoidable.

Traditional smoking techniques in the USA make prolonged holding of a marijuana "toke" de rigueur. From a dose-response standpoint, this is unnecessary. Inhaled THC is well absorbed after a very brief interval, and subjective high and serum THC levels do not increase beyond a maximum 10-second inhalation. Furthermore, prolonged breath holding under pressure increases the potential for hypoxia or pneumothorax.

Contamination of herbal cannabis by pesticides, herbicides, and bacterial or fungal agents is possible, and may represent a threat to the smoker, especially immunosuppressed patients. Scrupulous cultivation techniques avoid some of these issues. McPartland recommends pasteurization of herbal cannabis by heating in an oven of 150°C. for 5 minutes (McPartland 2001).

Waterpipes and bongs are popular techniques for cooling smoke. While they may reduce particulate matter as well, THC content and pharmaceutical efficiency also seem to be compromised. Surprisingly, the unfiltered "joint" seems to represent the most efficient means for conventional smoking, although use of hashish in a pipe (without tobacco) was not examined.

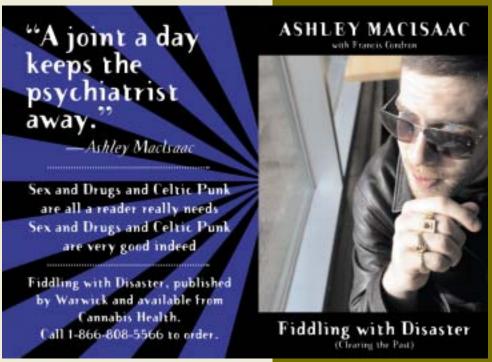
## Vaporizers for cannabis administration

Vaporization of herbal cannabis may allow delivery of THC and terpenoid com-

#### Dr. Russo's Findings and Policy Recommendations

- 1) Cannabis has a long and documented history in the treatment of neuropathic, musculoskeletal, spasmodic, and inflammatory pain conditions. Cannabis has a historical role as a palliative agent in terminal patients.
- 2) Additional adjunctive antidepressant and anti-anxiety properties of cannabis, as well as its antispasticity, and appetite stimulatory effects offer important therapeutic value in pain management patients.
- 3) Modern pharmacological and receptor studies of cannabis and cannabinoids support therapeutic claims.
- 4) Cannabinoids represent an important parallel system to the endogenous opioid system of pain modulation, and administration of cannabinoids can effectively synergize opioid responses while mitigating side effects.

  Cannabinoids show unique promise in treatment of neuropathic pain.



#### CANNABIS AND PAIN MANAGEMENT

ponents below the flash point of the leaf, thereby reducing exposure to smoke, tar and carcinogens. The technology has been hampered in its development by paraphernalia laws. Initial investigations of available devices had disappointing results, but further studies have demonstrated promising benefits on avoidance of carcinogenic components from smoking (Gieringer 2001). Research continues.

## Sublingual tincture of cannabis

This method of administration is under investigation by GW Pharmaceuticals in the United Kingdom employing combinations of specific strains of cannabis that are rich in THC or CBD. Terpenoids and other minor components that are important to therapeutic effects of cannabis are retained. Dose-metered sublingual sprays are currently in Phase 2 and 3 clinical trials for a variety of indications. Initial results indicate good bioavailability and excellent patient tolerance and clinical effects. Painful conditions have been of particular note in this research.

#### Aerosol THC preparations

Cannabis has a long history of use in asthma, even as a smoked preparation. A pure THC aerosol has been attempted numerous times in the past. Physical and delivery issues have been challenging, but more interestingly, pure THC seems to have an irritating and even bronchoconstrictive effect when employed in isolation (Tashkin et al. 1977). Some authors believe that antiinflammatory effects of concomitant terpenoid and flavonoid administration are necessary for full effects and tolerance in pursuit of the pulmonary route. Further research is underway by GW Pharmaceuticals, Inhale **Therapeutic** Systems, and possibly others.

#### Marinol®

#### (dronabinol, synthetic THC)

Marinol® is a synthetically derived THC dissolved in sesame oil, developed by Unimed Pharmaceuticals. It is available in capsules of 2.5, 5 and 10 mg and is marketed in the USA, Canada, Australia, and some areas in Europe. Until 1999, Marinol® was a Schedule II drug in the USA with close scrutiny to its usage, which was restricted to indications of AIDS-associated anorexia and cancer chemotherapy. After safety studies revealed a low potential for abuse or diversion, dronabinol was "down-scheduled" to Schedule III in 1999, allowing refill prescriptions for up to 6 months, and its "off-label" administration for any indication.

Clinicians have utilized Marinol® to only a limited degree. Its bioavailability is only 25-30% of an equivalent smoked dose of THC (Association 1997). Additional problems include the first pass effect of hepatic metabolism, which results in the production of a more psychoactive metabolite 11-hydroxy-THC, and its considerable cost, which may exceed US \$600 per month for the lowest dosage of 2.5 mg tid. Considerable anecdotal data supports preference by patients of smoked cannabis over dronabinol.

#### **Nabilone**

Nabilone is a synthetic cannabinoid said to be pharmacologically similar to THC, but more potent, less apt to produce euphoria, and possessing lower "abuse potential" (Association 1997). It is produced by Eli Lilly Company as Cesamet® and is available in the UK, Canada, Australia and certain countries in Europe as an agent for nausea in chemotherapy. Some scattered reports have noted benefit on spasticity in MS, and effects on dyskinesias.

A group in the UK assessed analgesic effects of nabilone in patients including some with neuropathic pain (Notcutt, Price, and Chapman 1997). Side effects of drowsiness and dysphoria were troubling. Several patients claimed improved pain relief and fewer side effects with smoked cannabis and preferred it to this legal alternative. Nabilone's cost was also estimated to be 10 times higher than cannabis even at black market rates.

#### **Future Directions and Needs**

Future directions for research on cannabis and cannabinoids will be primarily determined by political factors. Studies with smoked cannabis in the USA will continue under constraints imposed by NIDA: limited access to low potency smoked marijuana with rigorous oversight. Such studies may have limited applicability to the actual potential of true medical-grade cannabis or cannabis-based medicine extracts.

Herbal cannabis as a smoked medicine will never fulfill FDA guidelines to become a prescription medicine. Such a process requires absolute standardization of constituents, rigorous quality control, bacteriological purity, safety, reliability, reproducibility, and uniform dose titration. In contrast cannabis-based medicine extracts, whether employed sublingually or via aerosol, can easily meet this burden and will likely achieve market approval in Europe and Canada within months.

- 5) Historically, governmental commissions have almost uniformly recommended allowance or provision of cannabis for medical indications including pain.
  - 6) Financial investment in research into cannabis and cannabinoid strategies for pain management are deserving of support by medical and governmental organizations.
- 7) Current research supports the contention that no single agent will ever possess the spectrum of synergistic activity of whole cannabis.
- 8) Alternative delivery systems for whole cannabis and especially its standardized extracts represent the logical methods for administering this medicine to pain patients.
- 9) These practical and effective methods of cannabis administration (sublingual and inhaled CBME) in painful conditions are available now in other countries with imminent licensure. Government agencies should expedite efforts to provide comparable access to rapid onset alternative methods of delivery of standardized cannabis-based medicine extracts to deserving patients, or, alternatively until their approval, re-open the Compassionate Use IND, with the availability of potent, well manicured sterilized cannabis.

I believe that the USA should provide expedited access to cannabis-based medicine extracts and appropriate synthetic cannabinoids by patients with pain conditions, or, re-open the Compassionate Use Investigational New Drug (IND) program to provide potent, well-manicured medicinal-grade cannabis to chronic pain patients.



By Paul Henderson
Too good to be true.
A few months ago the
potential for marijuana
decriminalization and

the subsequent government distribution of marijuana to patients was sky high. Back in April Prime Minister Jean Chrétien announced his government was "not afraid to take on controversial issues" and would decriminalize marijuana to reduce the harm of criminal records that young people face.

Into the summer, July 9 was a date greatly anticipated by anti-prohibition advocates, as it was the day the government had to either start distributing medicine to exemption-holding patients or the marijuana possession law would be rendered invalid.

A couple of positive stories for medicinal marijuana users and a win-win situation, right?

Too good to be true.

The incremental improvements many felt were inevitable and forthcoming have turned out to be disastrous and, according to advocates and those on the front lines of making medicinal marijuana easier to get for patients, things are worse, not better.

Refusing to take a real position of any kind, it seems the federal government decided to follow a path whereby they pleased everyone. As a result they are instead pissing everyone off. The ruse Health Canada and the Ministry of Justice attempted to pull, talking out of both sides of their mouth, has blown up and the government is looking dumber than ever. A disastrous "decriminalization" bill has been tabled, and Health Minister Ann McLellan is using the recent court decisions as a platform to tell us what she really thinks: that marijuana has no medicinal value.

And as a result of the tabling of Bill C-38 and the government being forced into distribution the American anti-drug zealots are mad, doctors are mad, patients are mad, everyday pot smokers are mad: So who was this pseudo-decriminalization and reluctant effort at distribution supposed to please? Tough to get an answer to that.

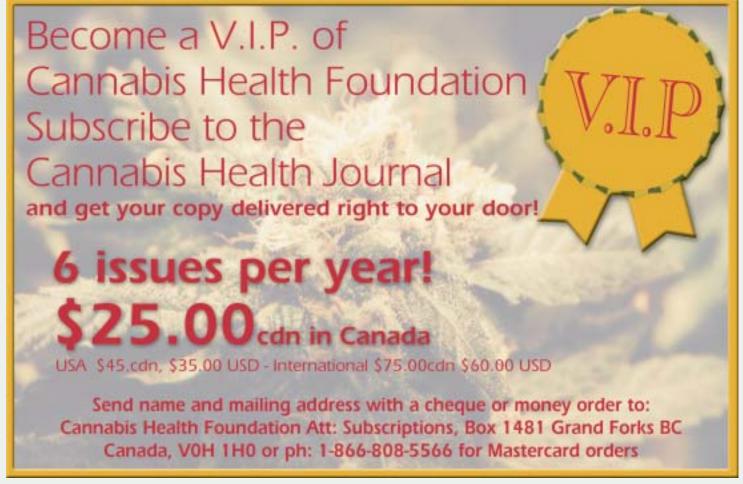
Criminal lawyer and anti-prohibition advocate Alan Young said that the whole

premise of decriminalization is based on the premise that marijuana is a relatively harmless substance and he was led to believe the government understood this. Now he knows he was wrong.

"The proposed bill was not just a disappointment, it was a major disillusionment with a process that should have borne fruit," Young told Cannabis Health. "I've worked on this way too long to have them give me such a compromised piece of legislation."

The only possible benefit that most can see in the legislation, Bill C-38, is the fact that those caught with minor amounts will avoid a criminal record. Instead they will pay a fine up to \$150. The reality though is that under the current Controlled Drugs and Substances Act (CDSA) most police simply confiscate small amounts and let people off with a warning. Now the police have a discretionary ability to give fines to people who maybe can't afford them.

It looks like that in most cases, Bill C-38 actually provides for harsher enforcement and Young says the proposed bill cannot even be called "decriminalization". Rather it is in fact a worst-case scenario.



"I don't care if you go to jail or not (even though that is a big issue)" Young said. "For me criminal law means the power to arrest, detain, and search, and that's what they haven't taken away. You cannot demystify a substance like marijuana when you still let Officer Friendly take you down to the station and deprive you of liberty. (Justice Minister Martin) Cauchon left it to the discretion of the police to decide whether to treat you like a highway traffic offender or whether to treat you like a criminal. That's not decriminalization, that's the worst-case scenario where a low-level unaccountable official is making the decision."

Senator Pierre Claude Nolin, chairman of

You cannot demystify a

substance like marijuana

when you still let Officer

Friendly take you down to

the station and deprive

you of liberty.

the Canadian
Senate Select
Committee on
Illegal Drugs
told DRCNet in
an interview
before the bill
was tabled,
"What the
prime minister
is proposing is

not decriminalization, it is what I call depenalization. We are removing the criminal penalties, but the behaviour itself remains criminal, it just triggers a lesser penalty. This is the shadow of the first step."

Others have much harsher words for Bill C-38: "Pathetic, shameful, corrupt and incompetent." That's what Dominic Cramer, president of Toronto Hemp Company (THC) said about the bill. Tell us what you really think Dominic.

"I would like to be able to applaud them for at least doing something, but screw that...what choice did they have? I am embarrassed and ashamed to be a Canadian today and encourage the resignation of our disgraceful Health and Justice Ministers."

While those who support prohibition

call Bill C-38 "decriminalization" and are infuriated by this "liberal" move by the government, some who support truly liberalized drug laws say this is not a step in the right direction but looks more like a long walk off a short pier.

Senator Nolin suggested that this is at least a first step but Cannabis Health asked Alan Young if he thought this was at least a step in the right direction: "No. I'd like to say 'yes', in fact I was to be paid a fair amount of money by American lobbyists to support Cauchon and I turned it down, and I'd like to have the money. The thing with law reform, you can't do it incrementally. You can't say, 'you know what, let's let this pass and see if it works

and then we can improve it in a few years.' They won't. As soon as it passes it will be left there for decades and it becomes a nonissue. And any mention of decriminalization

and their response will be 'ancient history, we've addressed it.' So it just doesn't go far enough."

So the honest question remains: Why did the government make this move when it doesn't address the real concerns of Canadians and, frankly, only needles the right-wing prohibitionists, including the Americans?

Young says that the status quo was repackaged to create the illusion of change and that "the government gave us a national drug strategy made in the USA." Clearly the government was in a bind knowing that the vast majority of Canadians support liberalized drug laws while the current government in Washington is as Draconian as we've seen in a long time. So they try to please and appease.

"First of all they want to look like they are responsive to the electorate..." Young said. "A solid strong majority of Canadians have wanted decriminalization since 1975, that's still the majority position. So, if you make the announcement plus you have two of your own

committee recommend it, you look like you are a responsive government. But if you are afraid of what the implications are and afraid of the reaction of the United States, what you do is you create the illusion of being responsive without being responsive. I actually think it was a brilliant ploy."

Well, it might have been brilliant had most people not seen its transparency. On the issue of what the Canadian consensus is, Senator Nolin said that "only 14% of Canadians want actual marijuana prohibition. The rest of the population favours legalization, decriminalization, or legalization for medical use. This reflects the fact that the population is increasingly well-informed, but still not enough." Cramer of THC says the only positive aspect of the bill regarding the elimination of criminal records is drastically overshadowed by the negatives.

"I can't think of another benefit besides the avoidance of a criminal record for users caught with tiny amounts," Cramer said. "But they will still be harrassed, likely more than before, and they still will be punished. For harmless and beneficial behaviour! What a joke. Medical users? Hell no! Medical users generally can't afford hundreds of dollars in punishment for using a natural and needed medicinal plant."

Cramer's frustration with the proposed bill is palpable and he is far from alone. While smokers across the country initially greeted the news with public smokeups, many quickly became aware of what was really being proposed.

One aspect hard to ignore is the potential cash grab in the system of fines. Some fear the fines could create a whole new detachment of pot cops dedicated to handing out the fines as a cash cow for the police.

"That's been the experience in Australia and we worry about that," Young says. "If it becomes so easy to ticket people then 40,000 offenders that police turn a blind eye to, will now suddenly be ticketed because of the money. We call that 'widening the net of social control' and that has often been the result of trying to liberalize the law."

With Bill C-38 tabled and looking pretty disastrous to those in the community, many had hopes that July 9 would come and either mean the end of the possession law or the government would create a meaningful distribution system. Too good to be true.

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#### TO GOOD TO BE TRUE

The government's July 9 annoucement that they would start distributing marijuana to doctors of the 500-plus medical marijuana patients currently with exemptions turned out to be a bust. The court's decision as a result of the action brought by Alan Young meant that on July 9 either the government had to start distributing marijuana or the CDSA law on possession would be invalid.

Ann McLellan was dragged kicking and screaming to this point and many, such as Phillipe Lucas, director of Canadians for Safe Access, have said the move smacked of bad faith. Young said that the government is doing this "with their fingers crossed behind their backs."

Day by day McLellan's point of view on the matter is becoming more and more clear. That point of view is summed up aptly in a quote she gave the National Post as reported on July 15: "If it doesn't have a medicinal benefit, I don't know why the department of health would approve it as such."

Sadly McLellan, in one swift statement, dismisses the benefits enjoyed by medical marijuana patients around the world and at the same time, she cynically starts a program that some argue she knows can't work.

Hillary Black, founder of the B.C. Compassion Club has said that this federal decision is "really just a smokescreen". According to Black the fact that the Canadian Medical Association and individual doctors are speaking out against the plan should have come as no surprise to Ottawa. The feds went this route, knowing it wouldn't work, which would give them time to appeal the court order set for late July.

Senator Nolin has said that he has spoken with a number of international experts on drug prohibition and they are waiting for the spark that could lead to radical change in the international system. "The Supreme Court of Canada could provide that spark," Nolin said. That



A poster showing the dissatisfaction of the medically needy by Russell Barth (aka Kegan) of Ottawa.

be the best shot as the elected officials stumble through the issue. Canada could be leading the way, they might lead the way, or the Canadian example of government meddling and bungling will be a paradigm of incompetence the rest of the world will ignore. Time will tell.

#### PRACTICAL COMPASSION

As Ted Smith explains, the Cannabis Buyers Clubs of Canada is a not-for-profit organization with locations in Victoria, and Parksville BC. and Halifax. The CBCC claims 1200 members and has been providing marijuana to people with incurable medical conditions since 1996. Ted, the founder of the CBCC, sees the club as a more practical straight-forward alternative to the traditional compassion club, based more on common sense and economics than philosophies, ethics and regulations. As stated on their web site, 'You do not need to have legal exemption to sign up with us, and signing up will offer you no extra legal protection. We are merely a source for medicine.'

That medicine could include several strains of high grade raw marijuana buds, hashish, cookies, cakes and other marijuana edibles. The club strives to keep costs down and supplies edibles made from shake donated at cost.

As Ted explains, the traditional clubs are asking patients for a doctor's recommendation that many doctors are not willing to provide. Often, patients are aware of their doctors' objections and are not comfortable even bringing up the subject of marijuana. We are the alternative to doctors.

The club's Victoria location of CBCC has been busted 5 times. Ted, always colourful and controversial, has run for the office of mayor, has taken some heat for his high profile activist activities, and yet overall Ted feels his relations with

his community and the Victoria police are positive.

Although the CBCC is considered by some to be more liberal, patients are required to provide proof of diagnosis and show proper identification. Ted explains, "we are sympathetic to individuals with transient pain problems, the broken arm, menstrual cramps or just relaxation. The CBCC serves the needs of individuals with long-term chronic health challenges". The club takes a hard line with patients who try to make money by re-selling the marijuana they get from the club. The 13 mostly part-time employees who staff the club, have been forced to exclude close to 100 individuals to-date for reselling and other unacceptable behaviors. Marijuana is supplied to the club by a number of small and discreet homegrow operations. Ted refers to the network as the family and argues that everyone is a winner in this equation,



Ted lectures at Spectrum H. S. on cannabis

the patients get a quality product at a reasonable price, the growers supplement their family income, and the medical system is not taxed further with unnecessary visits and paperwork. For more information on the CBCC (250)381-4220 on the West Coast (902)497-3941 on the East Coast Or e-mail the CBCC at:

Scott Johnstone: scott@cbc-canada.com (Webmaster) John Cook: normlns@hotmail.com (Director of Halifax outlet) \*\*

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#### TIME FOR A CANNABIS TRADE ASSOCIATION

Traditionally Governments are reluctant to provide economic assistance to invest authority in an individual or an individual company, preferring instead to support groups of companies that represent a common economic interest. Instead of giving advantage to one individual, the "trade association" give that advantage to a broad base of businesses. The Canadian Cannabis Bioproducts Trade Association (CCBA) is a membership-based non profit business association for the cannabis Industry in Canada with affiliate organizations in certain provinces. CCBA's mis-

sion is to be an effective voice of action in all matters concerning the development, marketing and free movement of cannabis and associated products and services throughout the world.

CCBA will work with governments and the cannabis industry to establish scientific and ethical standards. Membership in CCBA will be open to any individual or company that conducts business directly or indirectly related to cannabis. The organization of the Canadian and the individual provincial associations is in the early stages. For information on the Canadian Bioproducts Trade Association and, the Saskatchewan Cannabis Bioproducts Association Contact Morris Johnson Road 707 South, Box 33 Beaubier, Saskatchewan Canada, SOC-0H0 / 306-447-4944 ph/fax e-mail: megao@sasktel.net For information on the BC Bioproducts Trade Association Brian Taylor 250-442-5166 (editor@cannabishealth.com), Eric Nash &Wendy Little 250-748-8614 (eric@westcoastdigital.com) Debra Harper 250-474-7882 deb@drugsense.org





# THE HITZIG APPEAL JULY 29 & 30



Report by Jari Dvorak licensed medicinal cannabis patient. The Hitzig appeal hearing July 29th and 30th:Toronto, Ontario Canada.

Day one, the court room is full with standing room only.

Three judges presided today. At first the Crown lawyer presented their grounds for appeal. They can be summed up like this: the benefits of medical marijuana are not supported by results of clinical trials. It is not up to the State to make sure that every patient gets what he/she wants. One of the judges asked: how do you explain that on one hand you approve patients for medical marijuana but arrest people who sell it to them? The reply by the crown: It is not up to the government to run clinical trials and supply medications. This is up to the private sector to do. HC's (Health Canada) past experience is that there are not enough of researchers interested in studying marijuana. Lack of trials is not the inaction of the Federal Government. It is the lack of action by the private sector.

Our side was next. Prof. Alan Young explained the parallels between medical marijuana and the Morgentaler case

(abortions). Also argued that all medications have side effects. For example Zofran, used to treat nausea, can be toxic to the liver.

The judges have been very aggressive with both sides. One question to our side: how can you argue benefits of medical marijuana if the doctors' professional organizations disagree with you? Alan Young explained that CMA's opposition is due to insurance concerns, rather than medical concerns. This is of course the right answer. It does seem to me that things would be much easier for us if the CMA would be on our side. I'm a bit worried about that one. Time to hit the sack, *Jari* Hi all, day two.

The Crown's appeal for the Lederman decision ended yesterday. Some items from the hearings that seemed important to me: The Crown did a lousy job, as usual. They had 6 lawyers lined up in the courtroom (all paid by our taxes!). Their message was that it is not up to the government to supply and test marijuana; this is normally the job of private industry. It is not the government that failed, it is private industry that failed. Everyone was a bit stunned by that. This argument didn't go well with the judges.

The Crown was on a bit stronger ground when it argued that the doctors' professional organization, CMA is opposed to medical marijuana in general. One of the judges asked our team how we expect to win without the doctors supporting us. Prof. Young repeated that doctors are not opposed on medical grounds, but on insurance grounds. Most of the second day was about the constitutional aspect. John Turmell repeated his story about government's genocide, but those kind of strong words didn't go over well and are not helpful. John Turmell had a good argument that after 5000 years of plentiful anecdotal evidence that pot is a helpful substance, clinical research is failing us in utilizing creatively this body of knowledge. Also, researchers seem to be ignoring all of the studies that have already been completed around the

world. The judges seem to like Alan Young's argument that by pushing sick Canadians to medicine get through unlawful means, the government is creating disrespect and contempt of the law. This goes against the principles of fundamental justice. The question of legality of marijuana prohibition got quite a bit of attention. Both sides want the judges to declare where they stand on prohibition. According to Prof. Allan Young, it could take anywhere from a week to 3 months or more for the judges to reach a decision. There seems to be guarded optimism that the Crown will lose. If so, the Crown is expected to appeal. If they win, we will appeal. Whatever the outcome, it will be appealed to a higher court. In the meantime, the Lederman decision prevails. It's been almost one month since I applied for the HC dried marijuana and still I have not received anything.

Waiting, *Jari* 

# CROSSTOWN TRAFFIC OUR URAL OU

#### SUMMER OF LEGALIZATION TOUR

Marc Emery is Canada's most well-known marijuana activist, and among the world's biggest dealers in marijuana seeds. He is a powerful influence in the global ganja culture and is single-handedly helping to shape North American marijuana policy. The media has dubbed Emery "The Prince of Pot" and he enjoys the title, dispensing moral and financial support to all the activists that cross his path.

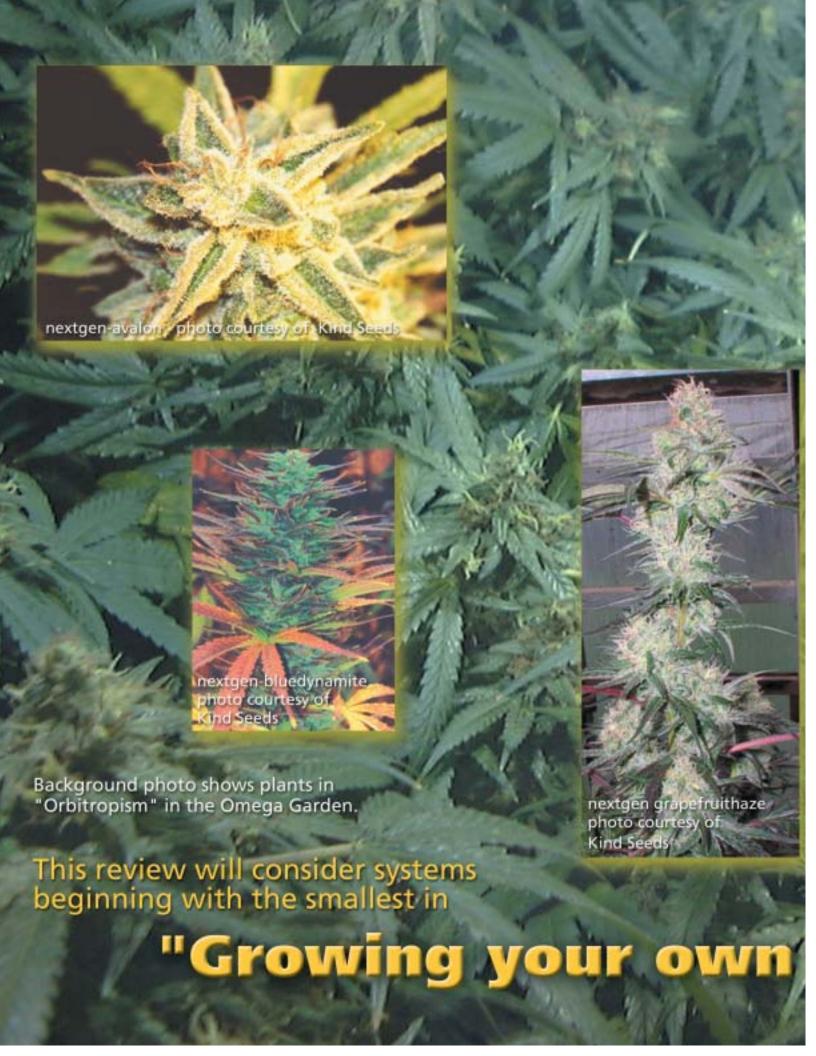
These are polite places, these Atlantic provinces.

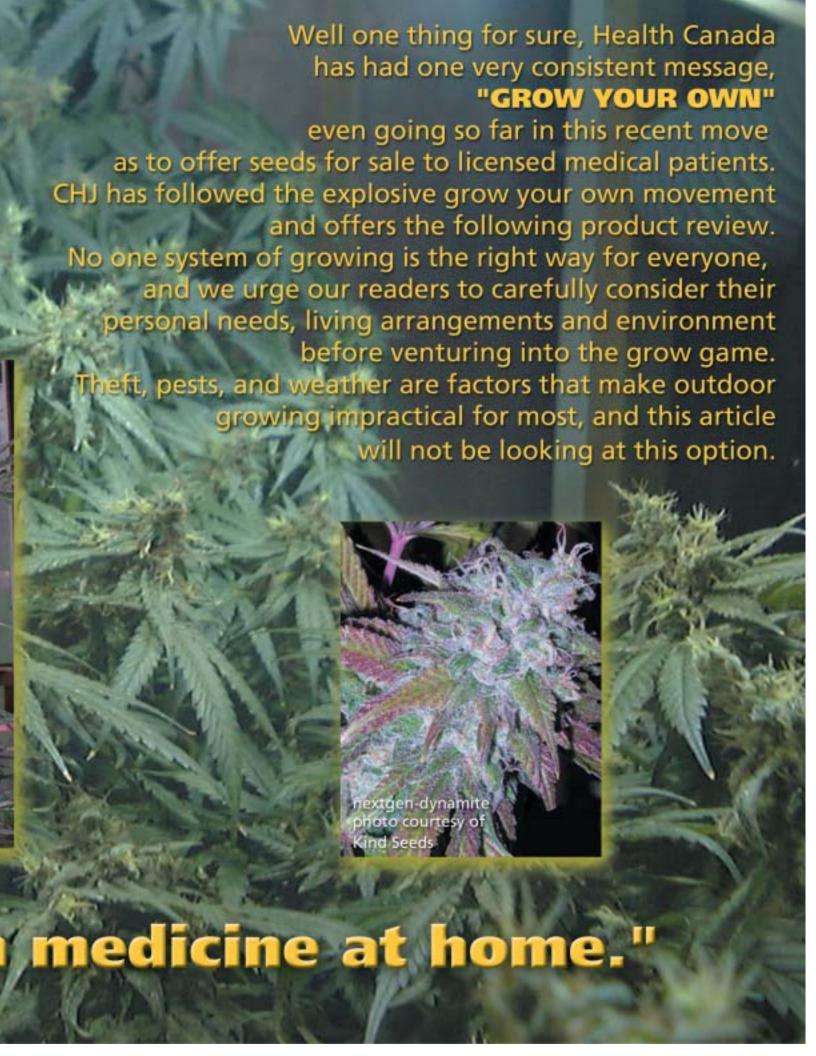
Over 200 people attended (I brought 120 brochures and continued pg. 32











#### The Table Top Grow

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The Cold Grow Unit

I have monitored the growing of several crops in this unit as it was readied for market. I am impressed with the volume and the quality of the finished product. Amazing, but I have seen it, good genetics, good nutrients, making sure the plants are triggered properly making maximum use of the space, the unit will produce 8 ounces of smoke quality cannabis per cycle.

Overall great returns for the capital investment, the basic unit sells for \$1999cdn. and, with 470

Watts at low amperage, econom-

ical from an operating standpoint. This unit will be safe on a standard 15 amp circuit and will



ready for harvest

cost \$4 to \$7 per month electrical. I particularly like working at counter height; for me and my ailing back, this makes plant care a breeze.

This unit would be ideal for the grower who required a modest volume of product, although 8oz in 8 weeks is still plenty for many medical users. From a safety standpoint, it's hard to see this small and safe cold light unit causing much damage. Great for nervous landlords and insurance companies.

#### **Building small - staying cool**

It is becoming increasingly popular to make your own cold light box. Handymen/growers have had success with constructing the box, but have been frustrated with the lack of availability and reliability of Hi-Intensity Fluorescent lights or, as some refer to them, High Output Compact Fluorescents. For the home builder, or to replace lights in a custom-built grow-unit, I would recommend the Daystar Dual Kelvin grow lamp. Low heat, solid state, comes in 75 and 100 Watt, and fits into a



regular size socket, and, best of all, no changing lights. They cover both the blue and red spectrums, making these bulbs ideal for veg and bud cycles. Finally, a reliable bulb and a company that stands behind their product.

Another unique product of interest to the handyman or aficionado is a line of spectrum-enhanced small Metal Halide

and High Pressure Sodium bulbs.

Gerald Garrison from Daystar emphasizes the importance of both spectrum and intensity and encourage new growers to start small.

Do not underestimate the sophistication of this company; along with the DDK series, Daystar offers the safety and efficiency-conscious consumer an array of lighting choices including some powerful and efficient high-tech light/fan systems, like the Daystar 400 Watt system, that puts out an exceptional 98700 total combined lumens of perfect spectrum light.



Daystary compact fluorescents at work

of perfect spectrum light.

Watch for an article on lighting by Gerald Garrison in the

Nov/December edition of *Cannabis Health Journal*. Daystar Lighting can be contacted by phone at 1-503-310-5082 and at www.daystarlighting.org.

# Grow solutions delivered to your door in a large brown box

Another option for the novice grower and still at the small and economical edge of the growing game is to set up a small closet-size growroom using a 400 Watt HPS grow kit. The kits offered by

http://www.growsystems.com/ contain everything required to set up your small room. Kits can be customized, but the standard kits include your light reflector bulb, timer, nutrients, reflective plastic and even grow bags.

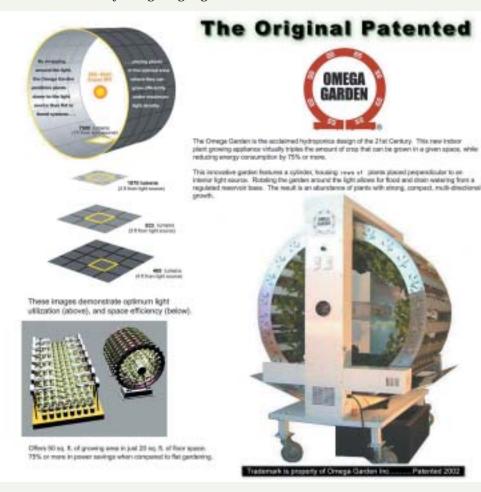
The ballasts and bulbs are from Sylvania and the company promises the most affordable out of the box indoor growing system available.

Setting up a small room will require the dedication of a space that can be darkened. The basic 400 Watt HPS kit is inclusive and economical at \$225cdn. plus tax. Properly set up in a closet 3.5'x 3'x 8' with a 400 Watt HPS light you can grow 6 to 8 ounces.

To find out more, contact the web at

http://wwwgrowsystems.com

Stepping up the ladder from the closet to the small room, let me introduce you to Ed Sweet, owner-operator of Sweet Hydroponics. Ed's favourite motto is "You take care of your garden and it will take care of you." Ed will not only customize, he







a typical kit from growsytems.com

will personalize your room. Ed believes that plants need air to breathe and room to spread their arms. Cramping your room with too many plants is greedy never works. For the novice grower Ed recomsetting mends 12x12 up

room, split equally into a vegetative and a budding area. With a 400 Watt MH and a 1000 Watt HPS, the basic mechanical will cost you about \$650 CDN. Ed believes in keeping customers for the long run and sells his 19 years of experience and knowledge along with every system that leaves his store. His parting advice to this novice grower was "Keep you reservoir big and nutrient levels under 1500 PPMs."

Ed can be contacted at 1-613-433-9600 or 281 Mask Rd. Renfrew Ontario, Canada.

## Hydroponic Gardens INDOOR & OUTDOOR GARDEN SUPPLIES 181 MASK RD., RENFREW, ONTARIO, CANADA (O'BRIEN RD. EXIT OFF HWY 17) 613-433-9600 VISIT OUR 2ND LOCATION: AMAICA - MONTIGO BAY, TOWER HILL DISTRICT

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How often does product come along that seems to address everyones concerns. The Grow Safe is a fire-proof, insulated steel box that can be fitted to a number of combinations of lights and fans



12 potted plants with light off. Fan & electrical outside

depending on the volume and quality of the consumer's cannabis needs. The standard unit is 5' 6" and will accommodate 12 - 3 Gal. dirt pots. Growsystems.com offers 3 levels of kits that are designed to fit the GS. The basic kit with a 1000Watt HPS light in this unit will produce 1 lb. or more per cycle. The insulated double wall construction and the insulated floor will allow the unit to be operated in an unheated part of a home. Not only is it constructed of solid unburnable steel, in most regions of North America this unit could be placed in a garage or other unheated outbuilding.

The unit will accommodate the Omega grow system and gives the GS an amazing 52 square feet of grow space.

As the cannabis revolution progresses, more discerning consumers are developing a taste for the different, the exotic, the exceptionally well-grown.

I want one of these units with the deluxe kit. In it I will grow two or three of the world's best cannabis strains and amaze my connoisseur friends. It also locks and is wheelchair accessible.

To find out more, check out the ads in this issue or contact Cannabis Health Toll Free at 1-866-808-5566 and ask about the "Grow Safe"



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400 Watt HPS - \$245.00 1000 Watt Hps - \$300.00 Just Plug in and 400 Watt MH - \$219.00

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## version of the First **Appliance**

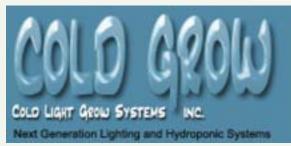
The only patented rotary hydroponic appliance in the world, the truly unique Omega Garden® causes everyone to step back in amazement. Try to describe what you're looking at; brilliant! The unit is now constructed from stainless steel (earlier versions were in plastic), all the components have been built in and the system is now safety certified (CSA approved). There is no wiring involved in the set up, one plug comes out of the system and plugs into any 110V outlet. The garden utilizes something we call orbitropism. A plant that has a stronger, more compact, closer inter-nodal, multidirectional growth pattern is the result of slowly revolving the plants around

Shop at our on-line retail store and receive fast & discrete shipping! Ve sell ALL the necessary products for indoor gardening! 750 3rd Ave. Prince George BC 888-564-9888 www.auroralighting.co Another way of looking at it, is that it is exercise for your plants. Orbitropism is the primary factor responsible for the unprecedented yield achieved with the Omega Garden ®

The Omega Garden® inventor and patent holder Ted Marchildon, had marked the unit as the future of Urban Agriculture, providing the grower with approximately 50 square feet of growing surface and accommodating anywhere from 50 to 300 plants. Quantities planted are determined by the requirements of the plants being grown. This achieves high intensity gardening in a small space. Originally designed for a variety of herbs and vegetables, the Omega Garden® has gained a reputation for growing superior Results of as much as 6 lbs in one cycle are easiattained. with the highest reports at

7.5 lbs in one cycle. The Omega Garden® team strives to produce an exceptional product coupled with superior helpful after-sales support and service. They are only a phone call away. A word of warning, look out for poorly made, cheaper knock-offs. Imitation is not always a form of flattery. Check out their website at www.omegagarden.com or







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by Steven Bacon

In spite of the prior misleading propaganda by Chief Fantino in the media, half a million people thoroughly enjoyed the experience that they were entitled to at the Stones/SARS concert in Toronto last week. It's safe to say that thousands upon thousands of doobies were burned there that day. I attended the concert sporting a Canadian Cannabis Leaf flag. I had a wonderful time meeting and posing for photos with hundreds of elated concert fans. I'm former Fire and Rescue myself and I noticed that all the EMS people I came across were thumbs up and beaming at the sight of the leaf. Not once, and there were packs of them roaming everywhere, did I get so much as a smile from a cop. I was gawked at and frowned upon by most of them.

It's unfortunate the chief won't acknowledge that half a million people were left to peacefully puff, if they so desired, and absolutely nothing bad came of it. On the contrary. With only 21 alcohol-related arrests and no reported medical incidents other than dehydration, one could conclude the obvious. That peace, love, music, and marijuana will always go hand in hand regardless of their prohibition.



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OF MARLIUANA

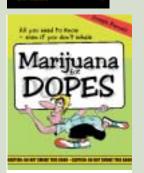




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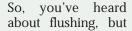
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#### GROW TIPS - FLUSHING YOUR CANNABIS

photos and story courtesy Klozit King



you wonder why? Let's paint a picture of what happens in nature to give us a comparison.

In nature, the rain droplets collect into droplets heavy enough to start falling earthward and eventually reach the earth where the plant is growing. It soaks the soil surrounding the plant, releasing the oxygen collected during its fall as it hits the ground.

Gravity continues to pull the water through the soil to the water table, washing any accumulated plant wastes down into the ground with it and away from the roots. At the same time, it helps break up and bring down fresh nutrients from the top of the soil. In this way, they



a close look at the flush water

get fresh air, water and nutrients with each rain and there is never any buildup of toxic wastes to prevent the normal function of the roots.

At home, we have to find a way to bring conditions in line with what is going on out in nature. Inside a pot, the fertilizers and plant wastes have no place to go, and become concentrated in the bottom, which can raise the ph to toxic levels. This causes what is known as "nutrient lock" and the plant can't get any nutrition. (Proper watering can help prevent this, waiting longer between watering, and

then generously soaking them so that the water comes out the pot's bottom holes.) Flushing can be said to be a very good equalizer to correct problems, it returns conditions in the soil to a baseline level, which can be adjusted on the basis of being "empty" of nutrients.

At around 2 to 3 weeks, the plant will need its first flush, and nutrients lock up and become unavailable for the use of the plant. Bring your plants to a sink,

and place them on it with the plug in. Gently pour water into the top, (so as not to disturb the roots) until it runs out the bottom and note the colour. At

> first it may be deep yellow like urine. (a pretty good description of what it is) Let the sink drain, and repeat this process noting the color each time until the water comes out clear.

> Let the pot dry out some until the soil pulls away from the sides of the pot slightly before you water next, and apply half strength all purpose fertilizer (20/20/20) so there will

be no hesitation in the plants growth due to a sudden lack of nuttrients.

If you do not do this, the plant's will start to slowly turn pale green, then yellow as the N is depleted and chlorosis takes hold. The plant would be basically starving to death without the addition of fresh nutrients to process.

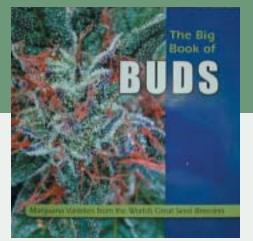
Note that the plants will need a second flush at around 6 weeks of vegetation to keep it healthy and also to switch the nutrient values as you change the lighting to go into your flowering phase of growth.\*\*











#### by Lisa Smith

The Big Book of Buds takes you on a factual journey into the amazing world of hemp and cannabis. Follow seeds from the beginning of time to present day and learn what uses other cultures have found for the plant. An entire chapter is devoted to the Canadian movement complimented with historic photos. Before reading this amazing book, I had no idea there is an existing cannabis college and a hash, marijuana and hemp museum. Not only does the BBB give you history about cannabis and hemp; it allows you to study 100

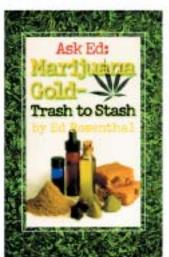
# The Big Book of Buds

different plant strains so you can make informed choices on what to grow. The BBB is a must read before you head out to buy seeds. Each of the 100 strains comes with its own scientific breakdown, which part of the world the strain originated, what it has been crossed with, preferred climate conditions as well as sensory expectations. If you are suffering from chronic pain, insomnia, arthritis or side effects from other medications, the BBB will help you choose the right plant for you with the correct medical benefits you are looking for. I found the BBB fun and easy to read with incredible amounts of valuable information and amazing photos. BBB has given me the knowledge to make an informed choice before I purchase seeds. BBB is not so much a book on how to grow but more "what" to grow.

5 Leaf Award \*\*\* \*\*\*\*

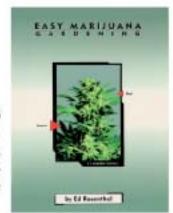


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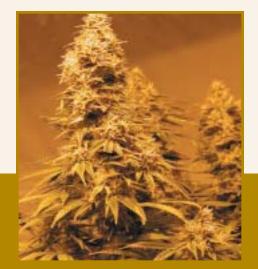
#### GETTING HELP WITH CANNABIS NUTRIENT RESEARCH

by Brian Carlisle

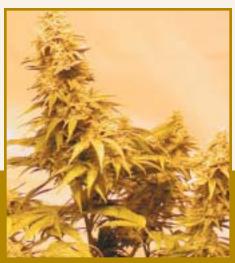
Several years ago, a series of unfortunate events caused me to contract several life-

threatening diseases, among them HIV and hepatitis C. I made the mistake of putting my faith in doctors and prescription medicines. And because I had not been properly diagnosed with HIV in a

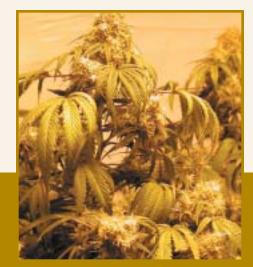
timely manner, I unknowingly exposed my wife Shannon to the disease. We both tried various prescription medicines, but our experimentation showed us that medical cannabis was the best medicine



**Advanced Nutrients Cola** 

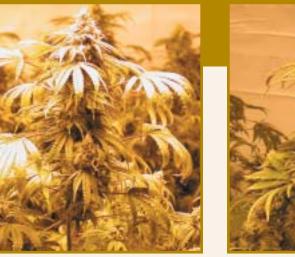


Canna Cola



**Dutch Master Cola** 

**General Hydroponics Cola** 



we could use. As a mood enhancer it makes us feel better, improves our appetite, gets rid of nausea and chronic pain, we can't overdose on it, it's a natural herb and all this with no toxicity.

We fought to get official certification from Health Canada's medical marijuana cultivation program. After many delays we have to assume were related to our cannabis activism we finally got official licenses to grow our own medicine. In 2002 my wife and I opened the Holy Smoke Healing Center Society in Chilliwack, British Columbia and by 2003 we found ourselves helping as many as





81 patients in the area. For us and many others growing our own medicine is proving to be challenging. We have all been confused about the conflicting claims from nutrients companies, anecdotal reports from growers and friends regarding marijuana nutrients and how they affect plant health.

In March 2003, I got together with a cultivation expert named Remo. Remo has been helping some of our medical growers, and together we talked to Mike Straumietis, one of the founders of Advanced Nutrients, a marijuana nutrients company based in Abbotsford, BC. I

Super Natural Cola



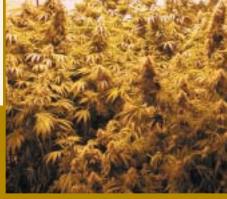
knew about Mike because he and his company have donated equipment, supplies and advice to patients, members, growers and to the Holy Smoke Society. We pitched Mike on a practical comparison of nutrients manufactured by six nutrients companies.

The medical marijuana grower is overwhelmed by sometimes 15 to 20 brand names and all claim to give you the biggest and most fragrant buds. We decided to compare Advanced Nutrients, GrowTek, Canna, General Hydroponics, Supernatural, and Dutch Master. We built a custom grow room outfitted with

eleven 1000-Watt Hortilux conversion bulbs, dehumidifiers and CO2 generators. The interior temperature and humidity were totally controlled and constant. The room was monitored 24 hours a day to guard against variations in ideal growth climate. We procured identical clones from a "Berlin" mother and divided them randomly into 8 clones for each of the six companies. All the clones were planted in identical containers and grow mediums. To ensure that our comparison was as scientific as possible, we made sure that all our grow room conditions, procedures and protocols were identical, except that each set of 8 plants received nutrients

from their designated nutrients company. We followed the standard instructions for the standard formulations of each company's grow and bloom formulas, and did not engage in any modification of the company's programs at all. We made sure that PH and PPM were adjusted properly and uniformly.





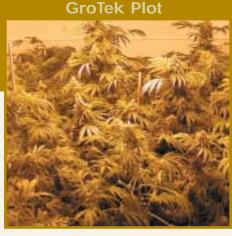


**Advanced Nutrients Plot** 

Canna Plot

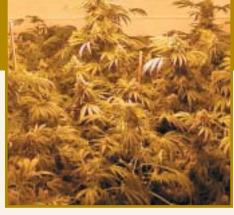
Dutch Master Plot













Almost immediately, there were noticeable differences in plant health and growth rates. Early on the General Hydroponics plants showed calcium, zinc, and potassium deficiencies and were third largest in size as the vegetative cycle ended. During flowering, the GH plants showed yellowing leaves that are characteristic of nitrogen deficiency, and continued to show signs of calcium deficiency. The GrowTek plants had all kinds of deficiencies, including nitrogen and calcium, but also showed signs of overfertilization. The GT plants were very small at the end of the veg cycle. We found GrowTek was hard to use due to complicated mixing instructions. It appeared to me and expert growers that

Dutch Master's "superbud" bloom formula contains a plant growth regulator and a hormone that stunted plant growth. The DM plants were like dwarfs! They also had what appears to be manganese deficiencies. Canna had nitrogen and calcium deficiencies. Natural's plants were stunted in size during the vegetative cycle, and had nitrogen burning and light, airy colas during the flowering cycle.

It was fascinating to see the array of nutrient problems as the plants matured. People who visited the grow room commented that some plants were so different from others that it was hard to believe they had all started as stable clones of the same variety. As this article is being written to meet the magazine's deadline in late July, we are about a week away from harvest, and have been flushing the plants for a week to clear any chemmy taste and other problems that result from improper flushing.

In both vegetative and bloom cycles, the Advanced Nutrients plants outdistanced those grown with other manufacturer's products. The Advanced Nutrients plants have been the best performers all along, even though they were (randomly) given two of the smallest clones. These small clones recovered and are now among the biggest plants with the most abundant colas. Their plants never exhibited the morphological, growth rate or vigour problems that dogged the plants grown



by products from the other companies. Other than a tiny amount of leaf tip burning due to the high nutrient load they put in their products, Advanced Nutrients' plants have consistently looked better, grown faster and budded better than their companions. Further, the AN program has been easiest to use.

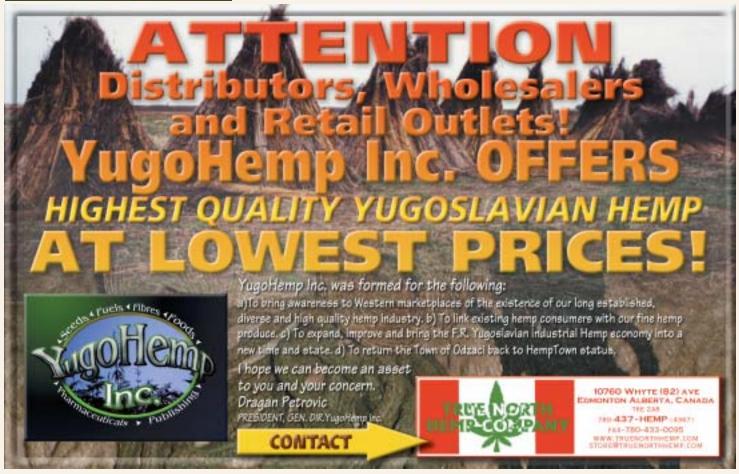
After harvest, we will be tallying the yield and testing the potency of each company's plants, the results will be posted in the next issue of the Journal, (November/December).

Some visitors to our grow room have expressed skepticism, accusing myself and other people managing the room of being influenced by the Advanced Nutrients medical marijuana patient assistance program. I understand their skepticism, but I can assure the cannabis community that these tests were conducted with only one aim: to find out which of the six companies had the best nutrients. I have a variety of medical conditions that make my life very difficult, and I and all other medical growers want the best nutrients so that when we expend the time, money and energy to

grow cannabis, we get the best cannabis and the highest yields possible. My personal desire is to produce the volumes, varieties and quality that will allow patients to produce safer and more effective concentrates. We have kept written records and have videotaped our procedures every step of the way. This test was conducted as fairly and as scientifically as our resources allowed. The winner will be determined by the quality and potency of the final product.

Editorial comment:

Cannabis Health Journal has reviewed this submission and is satisfied that the principles have made no false claims, and have actually conducted this study as reported. In the absence of institutionally initiated research, private research initiatives that involve medical patients appears to be the only research addressing the challenges that face the new medical grower. CHJ expects to publish the final outcome of this study in the Nov./Dec. 1st Anniversary edition.



#### HEMPTY

In the spring of '98 members of the Granby Hemp Co-op planted hemp in the North Fork valley, 14 km North of Grand Forks. In the first year in accord with the requirements of Health Canada farmers planted three, 10 acre plots. In 1999 a second 10 acre crop was planted across the road from the previous planting. These plots were for experimental purposes and with no resources to develop harvesting and processing in BC the project was placed on hold. However, nature had other plans. In the process of working the crop and attempting to harvest, seeds were knocked on the ground, survived the winter and germinated in the spring. Alas the seeds were hybrids and did not continue to reproduce over time. Over the two years



that the seeds germinated on their own Paval and his crew harvested and attempted to market a new product, Hemp Tea. Below is an exerpt of the the complete interview posted at http://www.openminder.com/issue12.html. The tea pot was created by Sonja's Special Things, of Grand Forks.

CANNABIS HEALTH What brought about the idea of hemp tea?

Pavel: Childhood memories. I remember the hemp plant all around. I remember cold teas out of the ice box. It seemed like a natural now that hemp is legal.

CH: When making the tea, do you use all of the plant when it is full grown?

Pavel: No. We use only the young green growing tips of the plant that gives the sweetest flavour to the tea. Picking only these tips makes it such a unique crop to harvest because you can start picking as early as 2 to 3 weeks after planting. When you pick that growing tip, it doesn't take long before there is double the growing tips to pick again. This way you can get many harvests per season. The plant, harvested this early, also has no time to build up any THC (the psychoactive ingredient) levels.

CH: How long does it take to get the tea to the customer?

Pavel: In 45 days from planting we've had it in the bags and on the shelves for sale. I don't believe that there is another crop you can do this within that short of a time, kind of like being on a 30-day credit plan. Being such a hardy plant, it can grow well under most conditions.

CH: With the hemp plant being so versatile, are you trying to develop other markets as well?

Pavel: There are so many aspects of this plant to experiment with. We have experimented with hemp tea in ice cream and have submitted a taste test to a representative of *Baskin & Robbins* ice cream. Hempty ice cream tastes entirely different than ice cream made with hemp seed oil. It is light and clean, with a green gold colour. Highly appetizing to the natural food connoisseur, and the ice cream fanatic within us all. We have been trying hemp sprouts, which have a wonderful zingy taste. I can't believe how good they do taste, I prefer them to the other sprouts on the market. That is

not even taking into consideration their nutritional value which I believe to be far superior. In the early part of this century New Zealand staved off starvation using

the nutritional value in the seeds and other by-products of hemp. More projects include working with extracts and tinctures, to be used in teas and holistic remedies.

We feel this is a pretty good crop not only for people's health and the land, but also the farmer's pocket book.

CH: What is the best way to prepare the hemp tea?

Pavel: One could prepare it much the same as regular green teas, but to get the maximum benefit from the tea, you would want to add milk or a similar oil-based product while you are steeping it. The active ingredients are oil-based and are therefore released to a greater extent

with milk.

CH: How much milk would you use? Pavel: Not too much, about what you might add to your normal tea or coffee.

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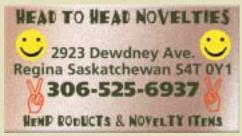
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Green Aid. The Medical Marijuana Legal Defense Fund (USA). Contributions welcome. www.green-aid.com or call 1-888-271-7674 (US), 1-415 677 2226. Donations are tax deductible (US).

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Colorado Med. Users: Colorado Cannabis is helping people join the Colorado Patients Registry. We offer grow advice, registration assistance and referrals. Contact us at mail@coloradocannabis.com

The Medical Marijuana Mission Real stories & valiant struggles of Federal Medical Marijuana Exemptees in Canada www.themarijuanamission.com

U.S./Canadian medical marijuana benefit concert. Hands Across the Border: Persons interested in the organization of a major musical event in the fall or late summer of 2003 please contact Cannbis Health, attention "Benefit Concert". We are seeking organizers, volunteers, bands, financial backers, etc. This is a call for assistance with this project. The organizers are open to ideas and suggestions. Canada's Medical Marihuana Resource Island Harvest P.O. Box #5 Duncan, BC, Canada V9L 3X1 250 748 8614 www.medicalmarihuana.ca info@medicalmarihuana.ca Help save the endangered Granby Grizzly from extinction. Send a free fax to the BC government.at www.granbywilderness.org

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JJ's Hemp Hollow

420 TCH West Salmon Arm, B.C. V1E 1S9 ph/fax 250-833-1414



#### SUMMER OF LEGALIZATION TOUR continued from page 15

they all were handed out), without question the largest turn-out of the Summer of Legalization Tour. I spoke for 20 minutes wearing my suit and a 'St. John's Maple Leafs' cap (the local farm team for the Toronto Maple Leafs) using an ocean themed bong. My speech got a good response but a large media contingent was there and the crowd swelled up right to 4.20 p.m., whereby I urged the crowd to sing 'O Canada' with me and I lit up at the end and the police did move in pretty quickly, but politely. Much to my surprise, there was no prison cell with this arrest, nor was I booked. I did hand over a gram of marijuana just to make sure they charged me. I have to go back to the station tomorrow and be interviewed by the 'Drug Squad' of the Royal Newfoundland Constabulary. The police said they will likely recommend a charge of possession of marijuana be laid, 'but that is up to the crown attorney to decide', they added. I get the sense that there is confusion about the status of the law here Newfoundland, and the news coverage so far has been helpful in disseminating the correct information regarding the 'marijuana possession is not an offense known unto law' statement by the Ontario Court of Appeal, further validation by the Rogin decision (Superior Court of Ontario)and provincial court decisions in St. John (New

Brunswick), Summerside (PEI), Halifax (Nova Scotia).

Here in St. John's, the Telegram newspaper had editorialized last Saturday that in view of the Ontario Court of Appeal decision, which the newspaper corroborated is as it has been described by me, asked the RNC (Royal Newf. Constabulary) what decision they would make about blatant pot smoking. For 2 days, no decision. Then they said they would arrest me, which indeed they did,

but released me ten minutes after arrest (much to my genuine surprise) with the proviso I show up tomorrow to be further interviewed by the drug squad officer in charge, and then at that point they would or would not recommend charges be laid, and then the crown attorney would get the final say.

Everyone was very polite, and some of the police officers expressed some degree of admiration. I know that police officers are reading these reports, so I don't want to embarrass anyone by quoting them, but lets say the police here were gentlemanly and decent, with some positive remarks.

Of course, I was pretty shocked to be released so quickly after arrest, and 40 or so people were there still, so we spoke (on police property still) together and I to the media (still there) for another hour. The police eventually came out, not to shoo us

away (I said, "Well, I guess we shouldn't make the police station our club house) but in fact said we were welcome to congregate there and continue 'as long as no one is smoking pot' which we weren't since we were all caught up in the discussion and I never thought about it. I was expansive as usual after Blueberry (the original bong hit at 4.20 p.m.) and the people seemed happy about the event. I am meeting with 50 or so of the St. John people in about 15 minutes so I am off to meet the group now. I came back to let you know that change is happening and the audience was all excited by events and my speech, so I am very happy. Also, two people were excited about running in the federal election for the Marijuana Party of Canada, in the 2004 election next spring, so that rocks. So tonight we celebrate and discuss further how to advance the movement here on the Rock.

Marc Emery, St. John's, 6.46 p.m. Newfoundland time Summer of Legalization Tour 2003

Aug. 6/03 update:

In total, so far, charged in Winnipeg, Regina, Moncton & St. John's (Nfld) with possession, no charges laid in Halifax, Charl'town, and Toronto.

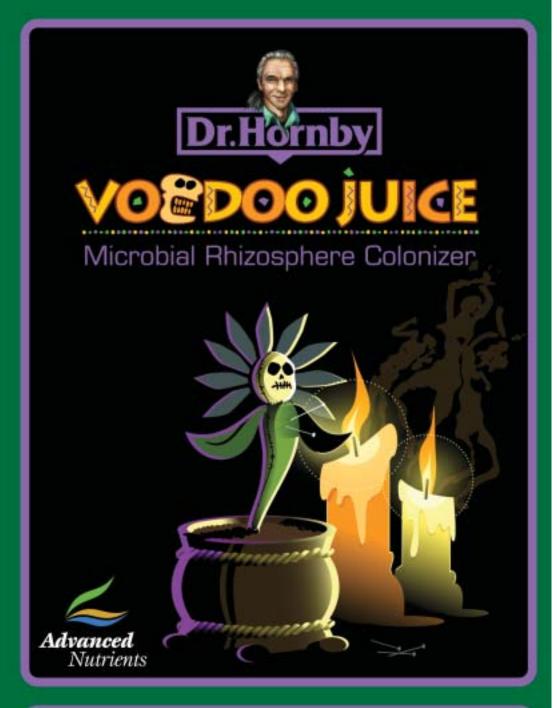
My intention is to smoke out Calgary and then Edmonton on August 9 & 10, and Prince George on August 14, with my first court date on Aug. 12 in Regina. Marc

# VOEDOO JUICE

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