

## **INQUIRY INTO USE OF CANNABIS FOR MEDICAL PURPOSES**

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# Medical Cannabis

A submission by Jacqueline Spruce  
Cannabis Science Australia



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# Summary

My name is Jacqueline Spruce and I wish to put forward my experience, interest, and knowledge of Medical Cannabis. First and foremost I do not consider myself an activist, rather I am a conservative professional who prefers to be recognised as an advocate of Medical Cannabis extracts.

I am currently the Director of **Cannabis Science Australia**, (CSA), a business I formed to pursue my interest in this area along with my colleagues. Cannabis Science Australia **is associated with Cannabis Science Inc in America**, ([www.cannabisscience.com](http://www.cannabisscience.com)) a very active, publicly listed company. CBIS are currently pursuing drug development with medical cannabis extracts for trials in America, predominately for **AIDS, Kaposi** as well as **basal and squamous cell carcinomas**. They have engaged a highly respected advisory board ([www.cannabisscience.com](http://www.cannabisscience.com)) and are committed to supporting CSA with all our endeavours. The list of board members can be viewed in the appendix.

My interest comes as a result of my very own experience with Medical Cannabis extracts. In December 2007 I was diagnosed with another basal cell carcinoma this time located on my right cheek. My Dermatologist, Dr Adriene Lee, referred me to see a plastic surgeon, Mr Tony Pennington, for a consultation to undergo plastic surgery to have the cancer removed, a route I have gone down before.

After the consultation I felt very uncomfortable with the thought of a scalpel incising my face and sought some other opinions. I visited Dr Anthony J. Dixon who specializes in "moh" surgery, but again I was not convinced this was the way to go. My final consultation was with plastic & reconstructive surgeon Dr Nigel Mann, who again explained the type of surgery he would perform to remove the BCC. I was still extremely fearful of a scalpel going anywhere near my face and commenced the journey to find an alternative treatment.

I was fortunate to meet a Swiss nurse who then led me to Rick Simpson's hemp oil extract. At first I was very apprehensive about this as I had never participated in the taking of cannabis in any form, it simply wasn't my thing. But the nurse convinced me this would be an effective treatment and the evidence on Rick Simpson's video was very compelling, and so I thought I have nothing to lose and everything to gain. Also it was just a topical application therefore it did not require me to engage it getting high everyday. I began a treatment regime of rubbing the oil extract on topically each day, and so it was within two weeks the cancer had retracted and finally completely gone as evidenced with my final biopsy. At a later date I also treated an area on my nose that reacted rather vehemently but once again cleared up perfectly. (Doctors reports and further information is available upon request).

I would also like to note that another associate of mine has since had success with topical application of the extract to treat an invasive squamous cell carcinoma. The evidence was supported by biopsies for both pre and post diagnosis treatment which resulted in them being given the all clear. (Evidence enclosed in appendix).

Further along this journey I had the good fortune of meeting **Professor Robert J Melamede**, and it was from this association I began to embark on continuing my quest for knowledge of Medical Cannabis extracts. Dr Melamede further educated me of the scientific properties of the cannabis plant, and so from this the collaboration with Cannabis Science was formed.

Since then I have been quietly going about my business while increasing my knowledge and contacts. I have attended the **21st annual Symposium of the ICRS (the International cannabinoid research society) in July 2011 held at Pheasant Run in Illinois, USA and also the 7th National Clinical Conference on Cannabis Therapeutics held in April 2012 at Loews Ventana Canyon Resort in Tucson, Arizona, USA**. Both of these conferences had presentations delivered by numerous scientists and physicians from around the world.

I was somewhat surprised to see that on both occasions I was the only Australian there! Not one of our Doctors or Scientists attended, which leads me to believe we are relatively out of touch and time with regards to this issue. While I am aware of some research being conducted here, I don't believe we have embraced the full potential of what can be achieved in this area.

I have access to endless credible peer reviewed scientific documentation examining the effects of cannabinoids on the endo-cannabinoid system, (The cannabis like compounds that are produced by our bodies and that homeostatically regulate all body systems from perception to death) and to further add to this I have developed very sound connections within this industry on an International basis. They are right across the board, from the Scientist, to the Doctor, the Grower, patients and so on. Therefore naturally a lot of my material in this submission will contain information based on American statistics and research.

Further to this the critical information that I need to relay to you is that Cannabis Science is finding that we are now at the beginning of the second AIDS epidemic. Long-term antiretroviral users are becoming fully drug-resistant, and as a consequence are coming down with Kaposi's sarcoma. Cannabis extracts are capable of putting Kaposi into remission while at the same time improving HIV associated measurable. (improved T-Cell count and decreased viral load)

To this end I feel I am able to offer you a fresh face with the ability to speak about this subject in a manner that would appeal to the general conservative public, (being one of those myself) who to date appear to be uneducated about the benefits and history of this medicinal plant. Instead they are attached to the stigma that has been created around the recreational use of the plant.

I have taken the liberty to attach a preview of a new program coming out in America that I happen to be a guest speaker on. I am the one opening and closing this preview for your reference it is the first link lactated on the web link page 15.

In closing I wish to say that up until this point in time I have remained somewhat private with regards to my interest in this area, as I have been waiting for the right time to come forth. My interest lies largely in the legalisation of **cannabis extracts for medicinal use only and with the highest of regulatory guidelines**, because as with any medicine or drug when used incorrectly and irresponsibly, there are consequences.

Thankyou for the opportunity to enter my submission and I would be available to attend any relevant meetings upon your request.

I look forward to hearing from you in due course.

Kindest regards  
Jacqueline Spruce

Prior to reading on, I wish to make reference that due to my travel and work commitments I have made my submission utilising bullet points, if you would like more detailed information I am more than happy to submit that upon request or attend any meeting to give further evidence to support my submission.

## FACTS

Please find below the relevant facts I wish to put forward for the legalisation of Medical Cannabis Extracts, some of these could also cross over into other segments such as arguments;

### medical cannabis - skin cancer

"The present data indicate that local cannabinoid administration may constitute an alternative therapeutic approach for the treatment of nonmelanoma skin cancer. Of further therapeutic interest, we show that skin cells express functional CB2 receptors. The synergy between CB1 and CB2 receptors in eliciting skin tumour cell apoptosis reported here is nonetheless intriguing because it is not observed in the case of cannabinoid-induced glioma cell apoptosis (21, 22). In any event, the present report, together with the implication of CB2- or CB2-like receptors in the control of peripheral pain (40–42) and inflammation (41), opens the attractive possibility of finding cannabinoid-based therapeutic strategies for diseases of the skin and other tissues devoid of undesired CB1-mediated psychotropic side effects."

#### Source:

Casanova, M. Llanos; Blázquez, Cristina; Martínez-Palacio, Jesús; Villanueva, Concepción; Fernández-Aceñero, Jesús; Huffman, John W.; Jorcano, José L.; and Guzmán, Manuel, "Inhibition of skin tumor growth and angiogenesis in vivo by activation of cannabinoid receptors," Journal of Clinical Investigation (Ann Arbor, MI: American Society for Clinical Investigation, January 2003), p. 49.  
<http://www.jci.org/articles/view/16116/version/1/files/pdf?disposition=a...>

There are currently over 800 scientifically peer reviewed articles on cancer and cannabis alone. Almost in their entirety they demonstrate broad spectrum cancer killing abilities. As well as exhibiting multi model anti - metastatic activity. In addition to these properties, cannabinoid treatments for cancer provide the additional benefits of appetite stimulation, pain relief, anti- depressive and sleep promoting activities.

### Evidence-Based Science: Relative Risks of Smoking Cannabis

**"Occasional and low cumulative marijuana use was not associated with adverse effects on pulmonary function."** - That is the conclusion of a 20 year longitudinal study of more than 5000 men and women by NIH researchers just published in the Journal of the American Medical Association: Association Between Marijuana Exposure and Pulmonary Function Over 20 Years - <http://jama>.

[ama-assn.org/content/307/2/173.short](http://ama-assn.org/content/307/2/173.short)

The chronically ill have a dilemma. Do they give up their natural right to a God-given herbal medicine and their civil right to personal privacy for legal narcotics? Or do they leave the system - risking their freedom, jobs and health benefits to seek their medicine on the "black market", where medical grade Cannabis is expensive and rare? Do they risk their homes and families to "grow their own" - often the only way to assure quality and supply?

Marijuana is completely non-toxic and non-lethal

**"Marijuana, in its natural form, is one of the safest therapeutically active substances known to man.** By any measure of rational analysis, marijuana can be safely used within a supervised routine of medical care. ...

#### Source:

US Department of Justice, Drug Enforcement Administration, "In the Matter of Marijuana Rescheduling Petition," [Docket #86-22], (September 6, 1988), pp. 6, 58, 68. <http://www.iowamedicalmarijuana.org/pdfs/young.pdf>

### Despite such restrictive control, cannabis has become the most widely used illicit drug in the western world.

Medicinal use of cannabis is legal in a limited number of territories worldwide, including Canada, Austria, Germany, the Netherlands, Spain, Israel, Finland, and Portugal. Since 1996, sixteen states have legalized medical marijuana use. They are: Alaska, Arizona, California, Colorado, Delaware, District of Columbia, Hawaii, Maine, Maryland, Michigan, Montana, Nevada, New Jersey, New Mexico, Oregon, Rhode Island, Vermont, and Washington. There are 10 U.S. states currently considering medical marijuana bills in their legislatures. "Some 483 natural constituents have been identified in marijuana, including approximately 66 compounds that are classified as cannabinoids (Ross and El Sohly, 1995). Cannabinoids are not known to exist in plants other than marijuana, and most of the cannabinoid compounds that occur naturally have been identified chemically."

#### Source:

Drug Enforcement Administration, "Denial of Petition To Initiate Proceedings To Reschedule Marijuana," Federal Register, Vol.76, No. 131, Friday, July 8, 2011, p. 40554. [http://americansforsafeaccess.org/downloads/CRC\\_Petition\\_DEA\\_Answer.pdf](http://americansforsafeaccess.org/downloads/CRC_Petition_DEA_Answer.pdf)

**Cannabinoids, the active components of Cannabis sativa and their derivatives, act in the organism by mimicking endogenous substances, the endocannabinoids, that activate specific cannabinoid receptors.** Cannabinoids exert palliative effects in patients



with cancer and inhibit tumour growth in laboratory animals. "The best-established palliative effect of cannabinoids in cancer patients is the inhibition of chemotherapy-induced nausea and vomiting. ....

"Other potential palliative effects of cannabinoids in cancer patients - supported by Phase III clinical trials - include appetite stimulation and pain inhibition. ....

"Cannabinoids inhibit tumour growth in laboratory animals. They do so by modulating key cell-signalling pathways, thereby inducing direct growth arrest and death of tumour cells, as well as by inhibiting tumour angiogenesis and metastasis.

"Cannabinoids are selective antitumour compounds, as they can kill tumour cells without affecting their non-transformed counterparts. It is probable that cannabinoid receptors regulate cell-survival and cell-death pathways differently in tumour and nontumour cells.

"Cannabinoids have favourable drug-safety profiles and do not produce the generalized toxic effects of conventional chemotherapies. ... "

#### **Source:**

Guzman, Manuel, "Cannabinoids: Potential Anticancer Agents." *Nature Reviews: Cancer* (October 2003), p. 746. [http://www.brainlife.org/reprint/2003/guzm%C3%A1n\\_m031000.pdf](http://www.brainlife.org/reprint/2003/guzm%C3%A1n_m031000.pdf)

#### **Medical and scientific organizations based in the United States that support access to therapeutic cannabis**

The American Academy of Family Physicians (1989, 1995); American Academy of HIV Medicine (2003); American College of Physicians (2008); American Medical Association's Council on Scientific Affairs (2001); American Medical Students Association (1993); American Nurses Association (2003); American Preventive Medical Association (1997); American Public Health Association (1995); Association of Nurses in AIDS Care (1999); Federation of American Scientists (1994); HIV Medicine Association (2006); Institute of Medicine (1982 & 1999); Kaiser Permanente (1997); Lymphoma Foundation of America (1997); National Association for Public Health Policy (1998); National Nurses Society on Addictions (1995); and Physicians Association for AIDS Care.

#### **Source:**

Patients out of Time, "Organizations Supporting Access to Therapeutic Cannabis," (Howardsville, VA: January 2009) <http://www.medicalcannabis.com/Healthcare-Professionals/supporting-organ...>

#### **Cannabis has been used as a medicine since circa 2500 years BC.**

It was introduced to Western medicine in the 19th century, as it was believed that the drug could be a useful pain reliever, anti-inflammatory, anti-spasmodic, and anti-convulsant.

#### **Heroin, alcohol and other substances trigger violent withdrawal symptoms if the chemical is cut off, that clearly doesn't happen with pot.**

#### **Source:**

<http://www.time.com/time/magazine/article/0,9171,2030902,00.html#ixzz2JVrsqhM1>

A study published in 2010 in the medical journal *Lancet* <<http://www.bbc.co.uk/news/uk-11660210>> ranked alcohol as the most harmful drug known to man, with more than double the potential harms of heroin use. Cannabis is way down the tree compared to this and yet alcohol is legal!

#### **Most marijuana users never use any other illicit drug.**

Marijuana does not cause people to use hard drugs. Marijuana is the most popular illegal drug in the United States today. Therefore, people who have used less popular drugs such as heroin, cocaine, and LSD, are likely to have also used marijuana. Most marijuana users never use any other illegal drug and the vast majority of those who do try another drug never become addicted or go on to have associated problems. Indeed, for the large majority of people, marijuana is a terminus rather than a so-called gateway drug.

#### **Most people who use marijuana do so occasionally. Increasing admissions for treatment do not reflect increasing rates of clinical dependence.**

According to a federal Institute of Medicine study in 1999, fewer than 10 percent of those who try marijuana ever meet the clinical criteria for dependence, while 32 percent of tobacco users and 15 percent of alcohol users do. According to federal data, marijuana treatment admissions referred by the criminal justice system rose from 48 percent in 1992 to 58 percent in 2006. Just 45 percent of marijuana admissions met the Diagnostic and Statistical Manual of Mental Disorders criteria for marijuana dependence. More than a third hadn't used marijuana in the 30 days prior to admission for treatment.

#### **Claims about increases in marijuana potency are vastly overstated. In addition, potency is not related to risk of dependence or health impacts.**

Although marijuana potency may have increased somewhat in recent decades, claims about enormous increases in potency are vastly overstated and not supported by evidence. Nonetheless, potency is not related to risks of dependence or health impacts. According to the federal government's own data, the average THC in domestically grown marijuana – which comprises the bulk of the US market – is less than 5 percent, a figure that has remained unchanged for nearly a decade. In the 1980s, by comparison, the THC content averaged around 3 percent. Regardless of potency, THC is virtually non-toxic to healthy cells or organs, and is incapable of causing a fatal overdose. Currently, doctors may legally prescribe Marinol, an FDA-approved pill that contains 100 percent THC. The Food and Drug Administration found THC to be safe and effective for the treatment of nausea, vomiting, and wasting diseases. When consumers encounter unusually strong varieties of marijuana, they adjust their use accordingly and smoke less.

### **Marijuana has not been shown to cause mental illness.**

Some effects of marijuana ingestion may include feelings of panic, anxiety, and paranoia. Such experiences can be frightening, but the effects are temporary. That said, none of this is to suggest that there may not be some correlation (but not causation) between marijuana use and certain psychiatric ailments. Marijuana use can correlate with mental illness for many reasons. People often turn to the alleviating effects of marijuana to treat symptoms of distress. One study demonstrated that psychotic symptoms predict later use of marijuana, suggesting that people might turn to the plant for help rather than become ill after use.

### **Marijuana use has not been shown to increase risk of cancer.**

Several longitudinal studies have established that even long-term use of marijuana (via smoking) in humans is not associated with elevated cancer risk, including tobacco-related cancers or with cancer of the following sites: colorectal, lung, melanoma, prostate, breast, cervix. A more recent (2009) population-based case-control study found that moderate marijuana smoking over a 20 year period was associated with reduced risk of head and neck cancer (See Liang et al). And a 5-year-long population-based case control study found even long-term heavy marijuana smoking was not associated with lung cancer or UAT (upper aerodigestive tract) cancers.

### **Marijuana has been proven helpful for treating the symptoms of a variety of medical conditions.**

Marijuana has been shown to be effective in reducing the

nausea induced by cancer chemotherapy, stimulating appetite in AIDS patients, and reducing intraocular pressure in people with glaucoma. There is also appreciable evidence that marijuana reduces muscle spasticity in patients with neurological disorders. A synthetic capsule is available by prescription, but it is not as effective as smoked marijuana for many patients.

### **Marijuana use rates in the Netherlands are similar to those in the U.S. despite very different policies.**

The Netherlands' drug policy is one of the most nonpunitive in Europe. For more than twenty years, Dutch citizens over age eighteen have been permitted to buy and use cannabis (marijuana and hashish) in government-regulated coffee shops. This policy has not resulted in dramatically escalating marijuana use. For most age groups, rates of marijuana use in the Netherlands are similar to those in the United States. However, for young adolescents, rates of marijuana use are lower in the Netherlands than in the United States. The Dutch government occasionally revises existing marijuana policy, but it remains committed to decriminalization.

### **Marijuana has not been shown to cause long-term cognitive impairment.**

The short-term effects of marijuana include immediate, temporary changes in thoughts, perceptions, and information processing. The cognitive process most clearly affected by marijuana is short-term memory. In laboratory studies, subjects under the influence of marijuana have no trouble remembering things they learned previously. However, they display diminished capacity to learn and recall new information. This diminishment only lasts for the duration of the intoxication. There is no convincing evidence that heavy long-term marijuana use permanently impairs memory or other cognitive functions.

### **There is no compelling evidence that marijuana contributes substantially to traffic accidents and fatalities.**

At some doses, marijuana affects perception and psychomotor performance – changes which could impair driving ability. However, in driving studies, marijuana produces little or no car-handling impairment – consistently less than produced by low to moderate doses of alcohol and many legal medications. In contrast to alcohol, which tends to increase risky driving practices, marijuana tends to make subjects more cautious. Surveys of fatally injured drivers show that when THC is detected in the blood, alcohol is almost always detected as well. For some individuals, marijuana may play a role in bad driving. The overall rate of highway accidents appears not to be significantly affected



by marijuana's widespread use in society.

**Source:**

<http://www.drugpolicy.org>

**Most of the identified health risks of marijuana use are related to smoke**, not to the cannabinoids that produce the benefits. **Smoking is a primitive drug delivery system.**

**Source:**

John A. Benson, Jr., MD

**Cannabinoids Cure Diseases & The Endocannabinoid System Makes It Possible.**

**MARIJUANA USE HAS NO EFFECT ON MORTALITY:**

A massive study of California HMO members funded by the National Institute on Drug Abuse (NIDA) found marijuana use caused no significant increase in mortality. Tobacco use was associated with increased risk of death. Sidney, S et al. Marijuana Use and Mortality. American Journal of Public Health. Vol. 87 No. 4, April 1997. p. 585-590. Sept. 2002.

**HEAVY MARIJUANA USE AS A YOUNG ADULT**

**WON'T RUIN YOUR LIFE:** Veterans Affairs scientists looked at whether heavy marijuana use as a young adult caused long-term problems later, studying identical twins in which one twin had been a heavy marijuana user for a year or longer but had stopped at least one month before the study, while the second twin had used marijuana no more than five times ever. Marijuana use had no significant impact on physical or mental health care utilization, health-related quality of life, or current socio-demographic characteristics. Eisen SE et al. Does Marijuana Use Have Residual Adverse Effects on Self-Reported Health Measures, Socio-Demographics or Quality of Life? A Monozygotic Co-Twin Control Study in Men. Addiction. Vol. 97 No. 9. p.1083-1086. Sept. 1997

**THE "GATEWAY EFFECT" MAY BE A MIRAGE:**

Marijuana is often called a "gateway drug" by supporters of prohibition, who point to statistical "associations" indicating that persons who use marijuana are more likely to eventually try hard drugs than those who never use marijuana – implying that marijuana use somehow causes hard drug use. But a model developed by RAND Corp. researcher Andrew Morral demonstrates that these associations can be explained "without requiring a gateway effect." More likely, this federally funded study suggests, some people simply have an underlying propensity to try drugs, and start with what's most readily available.

**Source:**

Morral AR, McCaffrey D and Paddock S. Reassessing the Marijuana Gateway Effect. Addiction. December 2002. p. 1493-1504.

**PROHIBITION DOESN'T WORK (PART I):** The White House had the National Research Council examine the data being gathered about drug use and the effects of U.S. drug policies. NRC concluded, "the nation possesses little information about the effectiveness of current drug policy, especially of drug law enforcement." And what data exist show "little apparent relationship between severity of sanctions prescribed for drug use and prevalence or frequency of use." In other words, there is no proof that prohibition – the cornerstone of U.S. drug policy for a century – reduces drug use.

**Source:**

National Research Council. Informing America's Policy on Illegal Drugs: What We Don't Know Keeps Hurting Us. National Academy Press, 2001. p. 193.

**PROHIBITION DOESN'T WORK (PART II): DOES PROHIBITION CAUSE THE "GATEWAY EFFECT"?:**

U.S. and Dutch researchers, supported in part by NIDA, compared marijuana users in San Francisco, where non-medical use remains illegal, to Amsterdam, where adults may possess and purchase small amounts of marijuana from regulated businesses. Looking at such parameters as frequency and quantity of use and age at onset of use, they found no differences except one: Lifetime use of hard drugs was significantly lower in Amsterdam, with its "tolerant" marijuana policies. For example, lifetime crack cocaine use was 4.5 times higher in San Francisco than Amsterdam.

**Source:**

Reinarman, C, Cohen, PDA, and Kaal, HL. The Limited Relevance of Drug Policy: Cannabis in Amsterdam and San Francisco. American Journal of Public Health. Vol. 94, No. 5. May 2004. p. 836-842.

**OOPS, MARIJUANA MAY PREVENT CANCER (PART I):**

Federal researchers implanted several types of cancer, including leukemia and lung cancers, in mice, then treated them with cannabinoids (unique, active components found in marijuana). THC and other cannabinoids shrank tumors and increased the mice's lifespans.

Source: Munson, AE et al. Antineoplastic Activity of Cannabinoids. Journal of the National Cancer Institute. Sept.

1975. p. 597-602.

### **OOPS, MARIJUANA MAY PREVENT CANCER, (PART II):**

In a 1994 study the government tried to suppress, federal researchers gave mice and rats massive doses of THC, looking for cancers or other signs of toxicity. The rodents given THC lived longer and had fewer cancers, “in a dose-dependent manner” (i.e. the more THC they got, the fewer tumors).

#### **Source:**

NTP Technical Report On The Toxicology And Carcinogenesis Studies Of 1-Trans- Delta-9-Tetrahydrocannabinol, CAS No. 1972-08-3, In F344/N Rats And B6C3F Mice, Gavage Studies. See also, “Medical Marijuana: Unpublished Federal Study Found THC-Treated Rats Lived Longer, Had Less Cancer,” AIDS Treatment News no. 263, Jan. 17, 1997.

### **OOPS, MARIJUANA MAY PREVENT CANCER (PART III):**

Researchers at the Kaiser-Permanente HMO, funded by NIDA, followed 65,000 patients for nearly a decade, comparing cancer rates among non-smokers, tobacco smokers, and marijuana smokers. Tobacco smokers had massively higher rates of lung cancer and other cancers. Marijuana smokers who didn't also use tobacco had no increase in risk of tobacco-related cancers or of cancer risk overall. In fact their rates of lung and most other cancers were slightly lower than non-smokers, though the difference did not reach statistical significance.

Source: Sidney, S. et al. Marijuana Use and Cancer Incidence (California, United States). Cancer Causes and Control. Vol. 8. Sept. 1997, p. 722-728.

### **OOPS, MARIJUANA MAY PREVENT CANCER (PART IV):**

Donald Tashkin, a UCLA researcher whose work is funded by NIDA, did a case-control study comparing 1,200 patients with lung, head and neck cancers to a matched group with no cancer. Even the heaviest marijuana smokers had no increased risk of cancer, and had somewhat lower cancer risk than non-smokers (tobacco smokers had a 20-fold increased lung cancer risk).

#### **Source:**

Tashkin D. Marijuana Use and Lung Cancer: Results of a Case-Control Study. American Thoracic Society International Conference. May 23, 2006.

### **MARIJUANA DOES HAVE MEDICAL VALUE:**

In response to passage of California's medical marijuana law, the White House had the Institute of Medicine (IOM) review the data on marijuana's medical benefits and risks. The IOM concluded, “Nausea, appetite loss, pain and anxiety

are all afflictions of wasting, and all can be mitigated by marijuana.” While noting potential risks of smoking, the report acknowledged there is no clear alternative for people suffering from chronic conditions that might be relieved by smoking marijuana, such as pain or AIDS wasting. The government's refusal to acknowledge this finding caused co-author John A. Benson to tell the New York Times that the government loves to ignore our report; they would rather it never happened.

#### **Source:**

(Joy, JE, Watson, SJ, and Benson, JA. Marijuana and Medicine: Assessing the Science Base. National Academy Press. 1999. p. 159. See also, Harris, G. FDA Dismisses Medical Benefit From Marijuana. New York Times. Apr. 21, 2006)

Possible effects of treatment with cannabinoids include: a decrease in pain and inflammation, blockage of cell growth, the prevention of blood vessel growth that supplies tumors, and anti-viral activity.

In Colorado, two percent of registered medical marijuana patients are using marijuana due to cancer.

More than 90 percent of medical marijuana users in Colorado use the drug for the management of “severe pain.” Nearly 20 percent use the drug for “muscle spasms,” the second-most reported ailment the drug is used to treat.

By November 2011, 161,483 new patient applications were received by the registry. 80,558 patients had been approved for medical marijuana cards.

As of November 2011, 41 patients were under the age of 18.

The average age of medical marijuana users in Colorado is 40 for men and 43 for women.

More than 900 different doctors in Colorado have signed for applicants of the registry.

69 percent of all approved applicants are male.

There is NO known lethal dose of cannabis

## Opinions

### **My personal opinion and the opinions of significant others regarding the use and legalization of medical cannabis extracts is as follows;**

It is time for reform. Our attitude and current model regarding cannabis in general is outdated.

I believe it requires a multi-pronged approach that encompasses all facets of this industry across the board.

Education is key to successfully implementing this legislation. For example, people are only educated right now that it is a harmful drug with no known medicinal benefits for which is totally untrue. There is tons of science that indicates otherwise, for example there are over 800 peer reviewed articles just on cannabis and cancer alone. So what really is the problem here? Are we saying our scientists are liars? There has been to date no real consideration for their data. So I ask what really is the agenda that has been going on here? It really is time to make the change. My intention has been to wedge the door open gently to the public by starting with topical applications of the extracts for skin cancer and kaposi sarcoma.

I believe a commonsense approach needs to be taken with all endeavors. A lot can be learnt from the mistakes, (well I consider them to be mistakes and poorly rolled out), that America has made in their approach to the legalization of medical cannabis.

Simple things can be implemented when creating this change that are subtle, yet powerful. For example I would never use the word marijuana in any of my wording be it promotional or otherwise, because the term Marijuana holds a negative tone to it and the stigma is largely attached to this description. Whereas the plants correct term is "Cannabis". I have only used the word Marijuana in this document when making references from other peoples work. I also believe it should go one step further and be known as cannabis extracts.

Strict regulated guidelines for the terms of use to be put in place. It is my opinion that the recommended use should only be in the form of oral medication or vaporized. It is proven that long-term smoking of any kind produces harmful affects to the body.

Driving under the influence of cannabis should remain illegal.

No advertising for medical cannabis, similar boundaries as tobacco.

The medicine should only be available via licensed pharmacists and in specific regulated doses. The dispensary model in America to me is a joke! I have visited many of them and because there is no unified guidelines to them, half of them look like a drug dealers haven. It takes the professionalism and credibility out of the medicine.

It has to be the same rules and regulations across the board, not one way for this state and one way for another. I believe the Federal police MUST be an inclusive and integral part of the process and development of this legislation. I know for a fact that they are willing to participate but their advice was to put the correct legal framework into place and they would support it.

You simply cannot have the state saying it is legal and the fed saying it is not, otherwise you end up in the same sorry mess America is in right now. Change in this area is inevitable so if you are going to do it, take your time and do the job properly and leave no stone unturned.

There must be a restricted age limit in place. I believe that limit should be 21 due to the scientific evidence of brain development in youth and the harm it can do from that perspective, Having said that I do feel there should be an exemption under special medical conditions because there is no doubt that it can assist children and youth who suffer certain conditions. We have a lot of evidence of that.

It should be mandatory for Doctors to attend educational seminars on the medicine and it's use before they administer it and they should also not be allowed to administer it without this accreditation. I have access to the best Doctors who have advised me they would be willing to come out here and conduct those courses.

There has to be provisions for safe and responsible use for users.

Severe penalties for corruption. Anyone misusing or abusing the system, inclusive of Licensed Growers, Doctors and the end user Patients.

Growers must go through a rigorous program and due diligence for issuing a license to grow has to be of the highest integrity. It is a possibility that growers can grow and produce the medicine, the less hands involved in the process the less likely the exposure to corruption becomes. Streamline the entire operation.

Implement a tax on the medicine. Just see how one state alone, Colorado, has amassed a considerable amount of money from this process and how they are now turning their parks green, the kids are getting better equipments at school and the list goes on.

By unifying and streamlining the entire operation from whoa to go the end user will receive a better, more beneficial product with less risks. One of the problems in America is the inconsistency and variability of the THC samples.

If you go down the road of allowing people to grow their own plants then it should definitely be a two plant per person policy. My only issue with this is how do you control it? The police can't be knocking on every many and his dogs door checking how many plants you have growing, they are under resourced as it is.

The legalization of medical cannabis extracts requires a conservative approach. I have noticed that to date the main image the general public have of medical cannabis is hippie activists from Nimbin, not that I disregard their opinion, I have been there to view their festival and basically they are preaching to the converted. This is exactly what is not needed if you are going to seriously present this to the public. It requires a strategy that presents the benefits from a credible, scientific approach with positive messages around how it will not only benefit the end users health, but it will benefit the government by creating additional revenue that can be well placed in sectors that are considered important to the public.

I am sure from the political party initiating this legislation, it would indeed be an extra string to the bow resulting in many additional votes!

I would support innovative ideas to move toward a system that would regulate, control and tax marijuana.

It worries me that users, particularly youth, are forced to buy hydroponic crap from the underworld that is so strong it is any wonder they suffer from psychological affects. It is of utmost importance that people are provided with a quality and safe end product.

When ever mind altering substances are used, be it alcohol or cannabis for example, there is always going to be those that abuse it, but ask me if I prefer to step into a room full of drunks or a room full of stoners? I can tell you which one I would choose now after everything I have experienced and researched.

I feel that medical cannabis should be administered with a treatment program attached that extends for a recommended period of time. I am not in favour of it being used continuously for extended periods of time, because long-term use of any substance inclusive of pharmaceuticals is detrimental to ones long-term health. If asked I can elaborate on that at a later date.

The use of a readily available over the counter nutraceutical has been proven to reduce the effects of panic attacks and paranoia when ingesting large amounts of THC, this would be helpful if people are first time users of the plant for medical reasons.

Today's cannabis hardly resembles that of the 60's and 70's because producers of the drug have now learned to increase the psycho activity with a much higher concentration of THC. Equally with the right breeder and knowledge we can now also breed strains that are similar to the 60s and 70's with low THC and high CBD. We therefore must have controlled grows so we can regulate and have some kind of quality end product to supply patients with.

Lastly Dr Raphael Mechoulam has called the cannabis plant **a treasure trove of pharmaceutical compounds**. There are over 80 phytocannabinoids produced by the plant in addition to other biological active compounds, only THC has psycho activity. Therefore, as I have previously stated, strains have been developed that are high in CBD (cannabidiol) that have demonstrated pain-relieving properties without the psycho active "high". Through my association with Cannabis Science Inc, they have a very high CBD, low THC strain that can be useful when THC is not required such as certain forms of pain and inflammation. We would like to get Cannabis Science pharmaceuticals approved here in Australia in an expedited fashion due to the critical nature of the current developing AIDS/Karposi epidemic as well as for the wide spread incidence of skin cancer in Australia.

## Other Peoples' Opinion

"Cannabis will one day be seen as a wonder drug, as was penicillin in the 1940s. Like penicillin, herbal marijuana is remarkably nontoxic, has a wide range of therapeutic applications and would be quite inexpensive if it were legal."

**Dr. Lester Grinspoon, professor of psychiatry at Harvard Medical School, Los Angeles Times, May 5, 2006**



When you think about all the people who have used marijuana—from political leaders to sports stars to corporate executives to people from every walk of life—one way to win this battle is for people to just be honest. If everyone who used marijuana stood up and said, “I use this; it’s pretty good,” the argument would be over.

I’m amazed that anyone could oppose marijuana for medical use. It’s compassionate. Doctors recommend it. But the federal government is so hung up on its war on drugs that it refuses to even allow medical research on marijuana.

**Peter Lewis, chairman of Progressive, net worth \$1.05bn, Forbes Magazine, October 10, 2011**

“The evidence is overwhelming that marijuana can relieve certain types of pain, nausea, vomiting and other symptoms caused by such illnesses as multiple sclerosis, cancer and AIDS -- or by the harsh drugs sometimes used to treat them. And it can do so with remarkable safety. Indeed, marijuana is less toxic than many of the drugs that physicians prescribe every day.”

**Joycelyn Elders, MD Former US Surgeon General Editorial, Providence Journal. Mar. 26, 2004**

“ACP urges review of marijuana’s status as a schedule I controlled substance and its reclassification into a more appropriate schedule, given the scientific evidence regarding marijuana’s safety and efficacy in some clinical conditions...

ACP strongly supports exemption from federal criminal prosecution; civil liability; or professional sanctioning, such as loss of licensure or credentialing, for physicians who prescribe or dispense medical marijuana in accordance with state law. Similarly, ACP strongly urges protection from criminal or civil penalties for patients who use medical marijuana as permitted under state laws.”

**American College of Physicians “Supporting Research into the Therapeutic Role of Marijuana,” acponline.org Feb. 15, 2008**

“The evidence in this record [9-6-88 ruling] clearly shows that marijuana has been accepted as capable of relieving the distress of great numbers of very ill people, and doing so with safety under medical supervision. It would be unreasonable, arbitrary and capricious for DEA to continue to stand between those sufferers and the benefits of this substance in light of the evidence in this record.”

**Judge Francis L. Young DEA Administrative Law Judge Administrative ruling on Petition to Reschedule Marijuana Sep. 1988**

“There is very little evidence that smoking marijuana as a means of taking it represents a significant health risk. Although cannabis has been smoked widely in Western countries for more than four decades, there have been no reported cases of lung cancer or emphysema attributed to marijuana.

I suspect that a day’s breathing in any city with poor air quality poses more of a threat than inhaling a day’s dose -- which for many ailments is just a portion of a joint -- of marijuana.”

**Lester Grinspoon, MD Emeritus Professor of Psychiatry Harvard Medical School “Puffing Is the Best Medicine,” Los Angeles Times May 5, 2006**

“Patients receiving cannabinoids [smoked marijuana and marijuana pills] had improved immune function compared with those receiving placebo. They also gained about 4 pounds more on average than those patients receiving placebo.”

**Donald Abrams, MD, et al. “Short-Term Effects of Cannabinoids in Patients with HIV-1 Infection,” Annals of Internal Medicine Aug. 19, 2003**

“There are really no other medications that have the same mechanisms of action as marijuana. Dronabinol (Marinol) is available by prescription in capsules, but has the distinct disadvantage of containing only synthetic delta-9-tetrahydrocannabinol (THC) which is only one of many therapeutically beneficial cannabinoids in the natural plant.”

**Gregory T. Carter, MD Co-director, MDA/ALS Center, University of Washington Medical Center Muscular Dystrophy Association website article Oct. 2003**

“For some users, perhaps as many as 10 per cent, cannabis leads to psychological dependence, but there is scant evidence that it carries a risk of true addiction. Unlike cigarette smokers, most users do not take the drug on a daily basis, and usually abandon it in their twenties or thirties. Unlike for nicotine, alcohol and hard drugs, there is no clearly defined withdrawal syndrome, the hallmark of true addiction, when use is stopped.”

**Colin Blakemore, PhD Chair, Dept. of Physiology, University of Oxford (U.K.), and Leslie Iversen, PhD Professor of Pharmacology, Oxford University Editorial, The Times (U.K.) Aug. 6, 2001**

I continue to be amazed that there is a debate after the voters clearly made their opinions known by their vote. Why is it that prohibitionist do not support democracy when the citizens vote to end the absurd drug war started

by the criminal President Nixon? He did so against the advice of the conservative Shafer Commission that he himself established to examine the marijuana issue. The result has been 20 million Americans arrested by focusing on minorities and our youth, a cost of 1 trillion dollars, thousands of lives lost due to the violence prohibition creates, and millions of people around the world needlessly suffering from illnesses that can be treated with safe, inexpensive cannabis preparations. Why is it okay to give our veterans addictive narcotic that are great for acute pain but refuse to allow them the more effective cannabis preparations for chronic pain? Why do we give our veterans antidepressants to treat their PTSD when they promote suicide, while we deny them cannabis preparations that appear to have lowered the suicide rate in Colorado? Why do our so called "leaders" sacrifice our soldier's lives and our national treasure to fight for democracy in foreign lands while they promote tyranny and terrorism at home? I am proud the Coloradans have stood for freedom and sanity. Sadly, the fight will not end until we treat governmental-illness with cannabis.

**Dr Robert J Melamede Ph.D**

"We've shown that the marijuana gateway effect is not the best explanation for the link between marijuana use and the use of harder drugs.

An alternative, simpler and more compelling explanation accounts for the pattern of drug use you see in this country, without resort to any gateway effects. While the gateway theory has enjoyed popular acceptance, scientists have always had their doubts. Our study shows that these doubts are justified.[...]

The people who are predisposed to use drugs and have the opportunity to use drugs are more likely than others to use both marijuana and harder drugs. Marijuana typically comes first because it is more available."

**Andrew Morral, PhD Researcher, Rand Corporation**  
**Press release discussing his study published in the U.K. journal Addiction Dec. 2, 2002**

When any medication is misused it becomes a clear and present danger.

Marijuana is an excellent nausea suppressant and appetite enhancer. It is very useful in treating the symptoms of cancer, HIV and hepatitis C, as well as glaucoma and other diseases. There is no argument that it has no recreational use; however, **clearly it does have medical benefits.** In short, the problem is not with the medication, but the medication user. My position thus is I am very much in support of medical marijuana and adamantly opposed to recreation marijuana—and all other drugs.

**Mitch Wallick, Ph.D., C.A.P., F.A.B.F.C.E., C.M.H.P., is executive director of C.A.R.E. Addiction Recovery, a holistic drug rehabilitation facility in North Palm Beach, Fla. He holds Ph.D.s in both counseling and addictions.**

To leave the third largest industry in the world -- worth about [http://www.cato.org/pubs/policy\\_report/v31n3/cpr31n3-4.html](http://www.cato.org/pubs/policy_report/v31n3/cpr31n3-4.html) \$350 billion per annum -- in the control of criminal cartels, people with values opposite to those of civilized society -- is foolish to the point of insanity. Surely we must presume that the governments of the world, with the help of the necessary experts, can do a better job at minimizing the harms associated with drug production, marketing and use than will moral-free criminals. The time has come for our leaders to recognize what has been obvious to many of us for a long time: that the prohibitionist approach of the War on Drugs has proved to be a failure.

Prohibition has been a charter for criminals, creating profits unprecedented in history for those sufficiently ruthless and well-organized to take advantage of the system. So enormous are the sums of money available to the drug cartels that police forces, the military and politicians, especially in countries with fragile systems of government, are unable to resist.

However, I think one can say with certainty that the current, illegal and totally unregulated market is the worst possible solution. We need to move in the direction of a strictly-regulated market, based on the principles of health, harm-reduction, cost-effectiveness and human rights. Indeed, improving our drug policies is one of the key policy challenges of our time, because so much of the harm and suffering comes, not from the drugs themselves, but from the policies that seek to control them.

**Amanda Feilding**

It is impossible to eradicate them (users of cannabis) since, as long as people demand them, a supply will always be created. I set up the Beckley Foundation in 1998 to create an evidence base on which better policies could be rationally constructed.

The war on drugs is a war on drug users – because users are criminalised and must operate in the underworld, they are exposed to drugs of unknown purity and contaminated injecting equipment, and access to treatment is much more difficult.

How could the laws be fixed? A first vital step would be to decriminalise the possession of drugs for personal use so long as no other crime is committed, as has happened in Portugal and the Czech Republic. A more radical policy, ruled out under the current UN conventions, would be to



create a strictly regulated, legal and taxed market in a drug. The obvious starting point would be cannabis. The Beckley Foundation's open letter states, "The global war on drugs has failed." Why is the discussion so resistant to moving forward?

If most people have any exposure to illicit drugs, it is through their negative effects – crime, gang violence, HIV, drug poisoning, etc. Any proposal to reform policy is seen as a capitulation to organised crime and an admission of defeat in the fight against these serious social problems. But the president of Guatemala [who supports reform] is no wishy-washy liberal: he is a right-wing former general and head of military intelligence. It is no coincidence that the presidents of Colombia and Costa Rica, who have also expressed the need for reform, both have backgrounds in national security or defence.

#### **The Beckley Foundation**

Kos Sclavos, backed the idea of dispensing cannabis to serious patients. He was apparently speaking at the Pharmacy Business Network conference in Canberra last month, on the same issue, in order to streamline use of drugs like marijuana for patients who are seriously in the need.

He highlighted the role of pharmacies in dispensing medicinal marijuana in order to deal with the larger issue of decriminalising illicit drugs. There are pharmacies in California where medicinal marijuana is legal, and that's the example which must be adopted in Australia. He further added about pharmacies that "they know about our work with Project STOP, real-time monitoring, they know it can be recorded, the audit trail and all those other things". It would be worth seeing how this issue is being resolved and if and when rules are being molded for the betterment of the system.

**Kos Sclavos, President, Pharmacy Guild of Australia**

## **Arguments**

I believe these arguments are legitimate topics that require discussion and debate.

#### **Argument 1.**

Smoking cannabis leads to schizophrenia. Do not choose one group to focus on and protect, i.e. schizophrenics, as the excuse as to why it cannot be legalized. In doing so you are sacrificing the majority that could be greatly helped and at the same time reducing the govern-

ment health expenditure and therefore lining the coffers so to speak!

#### **Argument 2.**

The latest figures released show that skin cancer alone costs the Australian government \$500 million dollars a year.

We have a solution to this with our topical cannabis extracts and that \$500 million could better be used on upgrading our health and education sectors.

#### **Argument 3.**

Long-term Cannabis use leads to structural changes in the brain. Anything used long term whether it be hard drugs, alcohol, cigarettes, pain killers, anti-depressants and so on leads to structural changes and debilitation including the natural aging process that is inhibited by cannabinoids. Ironically the United States Government has a patent on Neuroprotective properties of cannabinoids.

#### **Argument 4.**

Wide use of cannabis leads to problems in the community. In the individual states that have legalized medical cannabis in America, some have conducted experiments that have demonstrated positive results. They now have answers to arguments that have been bandied around for far too long and are not current, and do not reflect up to date science and statistics. For example some states have conducted experiments that have shown a decrease in suicides, a decrease in beer consumption, less car accidents and people actually getting off narcotics that are causing problems. These results surely have to be strong indications that must be considered.

#### **Argument 5.**

As anti-retroviral drug resistance increases there is an associated increase in aids related infections such as Kaposi Sarcoma. Already an increase in Kaposi cases is currently seen as drug resistance develops in people with HIV. We are at the beginning of a new epidemic, what does the Australian government have in place to deal with this? For example have they carried out any recent epidemiological studies regarding the incidence of Kaposi among Australian people with AIDS.

#### **Argument 6.**

Why are we so behind with our attitudes, both from the public and the medical profession, with regard to medical cannabis?

**Argument 7.**

Should people be allowed to grow their own medicine?

**Argument 8.**

Cannabis is going to make you sterile

Like everything in the human body homeostasis is critical, too many cannabinoids or too few cannabinoids can have a negative effect on sperm formation, egg implantation, and fetal development.

**Argument 9.**

Cannabis is addictive

**Argument 10.**

Cannabis has no accepted medical use

This phrase has been bandied around for so long now its yesterday's news. We now have enough scientific evidence that makes that statement pale into insignificance. Even without the scientific evidence the patients alone that are turning to cannabis for their ailments and the results that they are talking about is more than sufficient verification that cannabis has considerable medical benefits. It is just plain ignorance to state otherwise. How many times and how many people do we need to highlight the positive effects it has had on them in order to actually get the change of legislation through?

**Argument 11.**

The Controlled Substances Act of 1970, classifies cannabis as a Schedule I drug on the basis that it has "a high potential for abuse." What does this mean?

It means that the perception is that people start taking cannabis, they get hooked and become stoners and it begins to dominate their lives and creates further issues. This definitely happens in some cases but it also happens in the case of alcohol--and alcohol is perfectly legal.

**Argument 12.**

Cannabis is often associated with lifestyles that are mostly regarded as not hip or cool. Its general perception is that of users being looked upon as hippies, druggies or losers. This makes it difficult for people to feel enthusiastic about the prospect of enabling it to be utilized as a medicine.

**Argument 13.**

Cannabis is seen as a gateway drug.

Cannabis is historically linked with dangerous narcotics such as heroin and cocaine. Cannabis is not technically a narcotic, that term is historically referred to opium derivatives such as heroin and morphine. That association has

stuck through the ages and therefore people's perception of a normal recreational drug is that of alcohol, nicotine and caffeine, and their perception of an abnormal recreational drug is that such as heroin, cocaine and meth-amphetamines. It is no wonder that people are convinced that cannabis is a gateway drug because of where it is positioned in the drug policy. That perception is what drives the stigma against cannabis in general. Because cannabis has been banned for so long people have become comfortable with the current status that it is a dangerous drug, yet alcohol that causes way more harm to society is acceptable. Tell me how that makes sense?

**Argument 14.**

There have not been many appealing cases presented for the legalization of medical cannabis because most of the ones that come forward are those that society deems to be losers. The conservative, educated person who uses cannabis as a medicine would generally not come forward for fear of the retribution against their reputation both personally and professionally. You would be quite surprised at just who uses cannabis regularly from the professional arena.

**Argument 15.**

Cannabis is not more harmful than alcohol or cigarettes

**Argument 16.**

Legalization would increase the chances of the drug falling into the hands of adolescence.

This is not out of the question but if the boundaries set in the first place are severe enough then it can act as a deterrent. There is always going to be those that break the law, so why should everyone else have to go without to try and save a minority that are going to do it anyway. Parents should have to face a conviction if their child is found to be illegally using the drug; after all it is their responsibility to raise that child to be a law-abiding citizen. Plus drug busts trap young people in a flawed system that turns them into lifelong criminals.

Police resources are stretched as it is and they could be freed up to concentrate on more serious crime.

**Argument 17.**

Apart from its medicinal use, cannabis has many industrial and commercial uses. There are thousands of alternative products that can be made from hemp. Some of these include construction & thermal insulation materials, paper, geotextiles, dynamite, and composites for autos, insect repellent, cosmetics and hemp food. It is wrong to limit the use of such a diverse product just because one of its uses is deemed

## Recommendations for Action

Build a model from an evidence based approach, not one based on political opinion.

Become a leader of the global drugs policy rather than a follower.

Raise public awareness by creating sound education strategies.

Pursue policies that are tailored to our countries specific circumstances and needs, not what the rest of the world says we should be doing.

Form a committee of people who are not just educated with regards to illegal substances but people who are knowledgeable about the Cannabis industry.

Establish hard to get but easy to lose licenses for cultivation, wholesale and retail supply.

Packaging that is plain, uniformed and has warning labels similar to cigarettes.

Provide the right help and direction for people that are seeking information and consumer information.

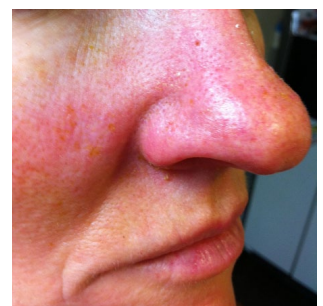
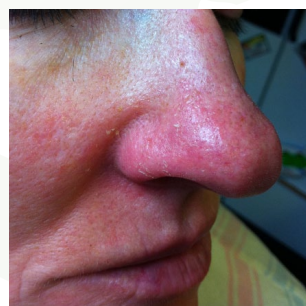
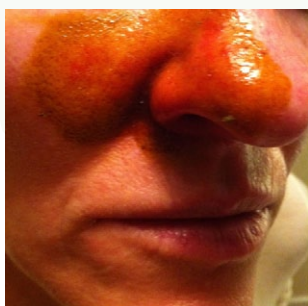
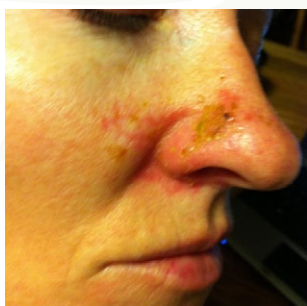
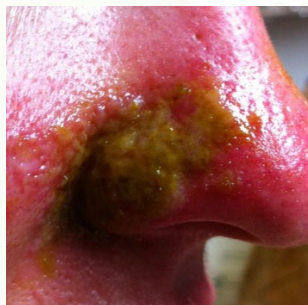
Proof of age for purchase (equivalent to alcohol)

Direct part of cannabis tax revenue should be used to fund alcohol and drug prevention and treatment programs

Engage people who are considered to be the top breeders of this plant and work on a program where they can breed and cultivate plants that are low in THC and higher in CBD and not hydroponically grown. Preferably on open air farms that are protected with high-level security. This will help with quality control and could also become an export opportunity for countries that are working on cannabis drug development. Australia could own the patent on such strains thus giving us a positive edge to this industry.

### Supporting Documents

1. **Anecdotal evidence pictures**
2. **Weblinks**
3. **Amanda Fielding article**
4. **Cannabis Science Advisory Board**



*"images of cannabis extract on the nose"*





*"images of invasive squamous cell carcinoma being successfully treated with cannabis extract."*

## Weblinks

1. Cannabis Planet Preview  
<http://vimeo.com/59555527>
2. A recent study by an insurance company has shown cannabis users are safer drivers (<http://money.msn.com/insurance/stoned-drivers-safer-than-drunks-carinsurance.aspx>).
3. How Cannabinoids May Slow Brain Aging | TIME.com  
[http://www.alternet.org/story/156269/how\\_weed\\_can\\_protect\\_us\\_from\\_cancer\\_and\\_alzheimer's](http://www.alternet.org/story/156269/how_weed_can_protect_us_from_cancer_and_alzheimer's)
4. Cannabis may help reverse dementia: study | The Border Mail  
<http://www.bordermail.com.au/story/1283217/cannabis-may-help-reverse-dementia-study/?cs=7>
5. Medical Marijuana To Manage Autism In Children  
<http://www.theweedblog.com/medical-marijuana-to-manage-autism-in-children/>
6. Spain Study Confirms Hemp Oil Cures Cancer without Side Effects  
<http://www.endalldisease.com/spain-study-confirms-hemp-oil-cures-cancer-without-side-effects/>

7. New use for cannabinoid-containing plant extracts - IP.com

<http://ip.com/patfam/xx/38135105>

8. <http://www.cureyourowncancer.org/testimonials.html>

## Amanda's Fielding Article

[http://www.huffingtonpost.com/amanda-feilding/towards-the-regulation-of-cannabis\\_b\\_1827325.html](http://www.huffingtonpost.com/amanda-feilding/towards-the-regulation-of-cannabis_b_1827325.html)

Towards the Regulation of the Cannabis Market: Where, When and How?

To leave the third largest industry in the world -- worth about <[http://www.cato.org/pubs/policy\\_report/v31n3/cpr31n3-4.html](http://www.cato.org/pubs/policy_report/v31n3/cpr31n3-4.html)> \$350 billion per annum -- in the control of criminal cartels, people with values opposite to those of civilized society -- is foolish to the point of insanity. Surely we must presume that the governments of the world, with the help of the necessary experts, can do a better job at minimizing the harms associated with drug production, marketing and use than will moral-free criminals.

The time has come for our leaders to recognize what has been obvious to many of us for a long time: that the prohibitionist approach of the War on Drugs has proved to be a failure. After 50 years of escalating expenditure, suffering and social devastation, it is time to rethink our basic approach to the control of psychoactive substances. It is time to consider policy options that have until now been too taboo even to discuss -- namely, control of these substances by a strictly regulated legal regime.

Psychoactive substances have been used by mankind since the earliest times and are deeply interwoven with the evolution of our cultural development. It was only in the 20th century that a system of control based on prohibition began to evolve, almost by accident. By the mid-20th century this tendency had gathered force, and finally got fixated in the three UN Drug Conventions of 1961, '71 and '88. Signed by almost every country in the world, these Conventions have achieved the status of holy writ -- unalterable and beyond reasoned debate.

Although around \$100 billion a year is spent<<http://www.counthecosts.org/seven-costs/wasting-billions-drug-law-enforcement>> trying to enforce these conventions, the many United Nations meetings that I have attended are

devoted to fulsome self-congratulation, with no consideration whatever of the actual data -- which would tell a story of costly failure and catastrophic collateral damage, particularly in the producer and transit countries. Before the 1961 Convention, which enacted the world-wide prohibition of the production, trade and possession of the three major plant-based drugs -- cannabis, cocaine and opium -- use around the world was minimal. Since then, drug-use has vastly proliferated, and has become a rite of passage for millions of young people. Prohibition has been a charter for criminals, creating profits unprecedented in history for those sufficiently ruthless and well-organized to take advantage of the system. So enormous are the sums of money available to the drug cartels that police forces, the military and politicians, especially in countries with fragile systems of government, are unable to resist. As a direct result, corruption in the 21st century is now more widespread and uncontrollable than it has ever been. And the horrific, moral-free violence and intimidation practiced along the Mexican border with the U.S. demonstrates that the power of drug-money can, in the last analysis, be greater than that of the modern state.

Prohibition has created a powerful coalition of police, drug enforcement agencies, prisons, legal systems, banks and criminal cartels -- all with a vested interest in maintaining the status quo of the current, prohibitionist policies. Those who suffer the most from these policies are the "little fish" -- personal drug-users and small-time dealers, who form the vast majority of the millions imprisoned on drugs offenses around the world. By contrast, the "big fish" go free, for instance, in 2010 \$378 billion of laundered drug money was identified<[http://www.alternet.org/story/151135/american\\_banks\\_'high'\\_on\\_drug\\_money%3A\\_how\\_a\\_whistleblower\\_blew\\_the\\_lid\\_off\\_wachovia-drug\\_cartel\\_money\\_laundering\\_scheme?paging=off](http://www.alternet.org/story/151135/american_banks_'high'_on_drug_money%3A_how_a_whistleblower_blew_the_lid_off_wachovia-drug_cartel_money_laundering_scheme?paging=off)> in the U.S. bank Wachovia, yet no individual was prosecuted, and it was not reported in the U.S. press except by Bloomberg.

Meanwhile, despite the vast cost to the world's taxpayers, and despite the terrible collateral damage from the War on Drugs, drug consumption continues to rise, particularly in those countries with relatively draconian policies, such as the U.S. and UK. Countries which have moved towards more liberal policies, such as the Netherlands, Portugal and Spain have, contrary to the predictions of the Drug Warriors, experienced not a surge but a reduction in problem use, drug-related deaths and crime.

There is no doubt that humans have always had an urge to alter their consciousness by a variety of techniques,



from extreme sport and meditation to the ingestion of psychoactive substances. In different cultures and times, different substances have been dominant. In most of the world, alcohol and tobacco took early supremacy, and have remained legally and socially acceptable, although they cause <http://www.msnbc.msn.com/id/39938704/ns/health-addictions/t/alcohol-more-dangerous-heroin-cocaine-study-finds/> more harm to health and costs to society than many of the illegal drugs.

There is no single, one-size-fits-all solution to the problems with which drugs and drug-use confront society. This very complex situation demands the development of subtle policy responses, adapted to local needs and conditions. However, I think one can say with certainty that the current, illegal and totally unregulated market is the worst possible solution. We need to move in the direction of a strictly-regulated market, based on the principles of health, harm-reduction, cost-effectiveness and human rights. Experimental new policies must be cautiously introduced and carefully, scientifically monitored. The different substances need different regulatory controls, especially tailored to their specific characteristics, and individual countries should be free to pursue policies conforming to their particular circumstances and needs.

It will never be possible to eliminate problematic drug use but, in my opinion, more scientifically-based policies could greatly reduce these harms. Indeed, improving our drug policies is one of the key policy challenges of our time, because so much of the harm and suffering comes, not from the drugs themselves, but from the policies that seek to control them.

In 2006, I realized that although cannabis accounted for [http://www.unodc.org/pdf/WDR\\_2006/wdr2006\\_chap2\\_biggest\\_market.pdf](http://www.unodc.org/pdf/WDR_2006/wdr2006_chap2_biggest_market.pdf) 80 percent of the world-wide use of illegal substances, it was, amazingly, never mentioned at international meetings such as the U.N. General Assembly. It was the elephant in the room: no one wanted attention brought to the fact that this relatively harmless substance was the mainstay of the massive and costly War on Drugs. I therefore convened the Global Commission on Cannabis, consisting of the world's most respected drug-policy analysts, to give an overview of the potential harms of cannabis and the effectiveness of current prohibitionist policies, and to provide alternative policy recommendations both inside and outside the current conventions. The Commission also provided a new Draft Framework Convention on Cannabis Control, a blue-print of how a country might control a regulated market. The Commission's Report,

co-published with Oxford University Press, has been very influential among policy-makers around the world. A subsequent report commissioned by the Beckley Foundation, entitled Roadmap to Reform the UN Drug Conventions, sets out methods by which an individual country, or a group of countries, might adapt the conventions to better suit their individual needs, e.g. by clear decriminalization of personal drug possession, and by the legal regulation of one or more controlled substances.

Cannabis is the obvious first candidate for experiments in regulation, as it is most widely used, creates minimal harms and is the most socially accepted of currently controlled drugs. As the production and sale of recreational cannabis is prohibited by the U.N. Conventions, they would need to be amended to permit such an experiment. Until that happens, any partial experiment with regulation must be carried out in the legal grey area of latitude within the Conventions, as is now happening with the Cannabis Social Clubs in Spain, where cannabis is sold on a not-for-profit basis to club members.

There are various possible forms of regulation, from the medical marijuana model favored in the USA, to a loose model of regulation similar to that used for alcohol, to a strict regulation, as is currently being applied to tobacco. I, and many experts favor the last option, because it offers maximum protection to the user while recognizing the individual's freedom of choice and human rights.

In this model, the state would license private producers and vendors. There could be three forms of producer: i) cannabis social clubs, already tried and proved to be successful in Spain; ii) smaller farmers; and iii) larger producers -- maybe run along the lines of GW Pharmaceuticals in the UK -- where cannabis is grown organically from cloned plants, and so the ratio of the main constituents (THC and CBD) can be controlled and labeled. Licensed vendors would be required to undertake harm-reduction measures, including the provision of information and education, and enforcement of minimum age restrictions. Advertising would be banned, and the product would be subject to a sales tax, among other regulatory controls.

#### **Legal regulation would bring about many advantages such as:**

1. The product's purity and potency, including the ratio of the main ingredients -- THC and CBD -- could be controlled and clearly labelled.



2. Users would not be criminalized, so they would be able to access advice and treatment without fear of prosecution. Also, lives would not be unnecessarily stigmatized with a criminal record.

3. Police and court time, and prison space, would be freed up for more serious crimes, thereby bringing about substantial savings in government expenditure.

4. Substantial tax revenues would be collected, which could be spent on the provision of improved education and treatment.

5. Creating a legal, strictly-regulated market in cannabis has great economic benefits, particularly important in these times of economic hardship. Recent findings from a Beckley Foundation-commissioned Report on a Cost-Benefit Analysis of a Regulated and Taxed Cannabis Market in England and Wales indicate that a minimum of over U.S. \$1.6 billion could be generated per year if such a market for cannabis was set up in the UK. I expect that this figure would be similar, if not greater, in an equivalent Spanish market.

6. This revenue would come from a variety of sources: firstly, roughly \$170 million would be saved on law enforcement costs, due to police not needing to waste time on arresting citizens for cannabis possession. The judicial system would save \$155 million by not having to sentence users, and without the need to imprison them, \$135 million would be saved. With these people not being incarcerated, they can remain a productive part of society, generating an additional \$16 million. Finally, taxation of the cannabis product itself would produce around \$1.2 billion for the government's pocket. All of this revenue could be invested into facilities for treatment of problem drug users and education, or used to reduce the national debt.

7. As to the where? when? and how?, in the past year or two there has finally been a shift in attitudes to global drug policy. About 30 countries have now undertaken some form of decriminalization of drug use. Former presidents, especially in Latin America, and other distinguished public figures have declared that current prohibitionist policies are no longer fit for purpose, and have called for an end to the taboo on consideration of alternative options. The Beckley Foundation's Public Letter calling for such a debate has been signed by 7 former presidents, including Jimmy Carter, 12 Nobel Prize winners, and by prominent intellectuals such as Noam Chomsky. Earlier this year, the letter was, for the first time, signed by a president in office, namely President Otto Pérez Molina of Guatemala, who has

asked the Beckley Foundation to provide him with reports outlining alternative policy options, including regulation, to tackle the violence and corruption in Central America created by the illegal drug trade. Other Latin American presidents, such as President Santos of Colombia, have also expressed the need to explore policy alternatives. The President of Uruguay has recently proposed the introduction of a regulated market for cannabis.

8. Momentum and critical mass are gathering behind the calls for fresh approaches. The producer and transit countries of Latin America have suffered enough from the policies developed by consumer countries and maintained by the greatest consumer of them all, the United States. There is hope at last of escape from the folly of the present, failing prohibitionist regime, and of the implementation of subtler policies based on science and pragmatism rather than ideology.

**Please see below the list of world-class drug developers that have now embraced Cannabis Science's efforts.**

#### ***Cannabis Science Inc Advisory Board***

**Dr. Roscoe M. Moore, Jr., D.V.M., Ph.D., D.Sc.** Until his retirement, Dr. Roscoe M. Moore, Jr. served with the United States Department of Health and Human Services (HHS) and was for the last twelve years of his career the principal person responsible for global development support within the Office of the Secretary, HHS, with primary emphasis on Continental Africa and other less developed countries of the world. He was the principal liaison person between the HHS and Ministries of Health in Africa with regard to the development of infrastructure and technical support for the delivery of preventive and curative health needs for the continent.

Dr. Moore received his Bachelor of Science and Doctor of Veterinary Medicine degrees from Tuskegee Institute; his Master of Public Health degree in Epidemiology from the University of Michigan; and his Doctor of Philosophy degree in Epidemiology from the Johns Hopkins University. He was awarded the Doctor of Science degree (Honoris-Causa) in recognition of his distinguished public health career by Tuskegee University.

Dr. Moore was a career officer within the Commissioned Corps of the United States Public Health Service (USPHS) entering with the U.S. National Institutes of Health (NIH) and rising to the rank of Assistant United States Surgeon General (Rear Admiral, USPHS) within the Immediate Office

of the Secretary, HHS. He was selected as Chief Veterinary Medical Officer, USPHS, by Surgeon General C. Everett Koop.

Dr. Moore served as an Epidemic Intelligence Service Officer with the U.S. Centers for Disease Control and Prevention (CDC). He was with the Center for Veterinary Medicine, U.S. Food and Drug Administration (FDA), before becoming Senior Epidemiologist within the National Institute for Occupational Safety and Health, CDC. He served as the Chief Epidemiologist with the Center for Devices and Radiological Health, FDA. He directed the Epidemiology and Biostatistics Program and was an Assistant Professor of Oncology within the Howard University College of Medicine Cancer Center.

**Dr. Dorothy Bray, Ph.D.** Dorothy Bray, Ph.D., Former Global Director of HIV Research and Senior Clinical Program Head of HIV and Opportunistic Infections for GlaxoSmithKline, to the Company's Scientific Advisory Board. Dr. Bray held various positions of responsibility at GlaxoSmithKline.

Dr. Bray is the President and owner of ImmunoClin as well as a member of the Scientific Staff and the Head of Scientific Business Development of The Medical Research Council Clinical Trials Unit. As well, Dr. Bray has authored or co-authored multiple publications and has an extensive network of collaborations and contacts with pharmaceutical companies, governments, and non-government organizations in key developed and developing markets; European Commission Scientific Expert.

Dr. Bray's extensive experience in the field of HIV drug development will compliment Cannabis Sciences' prestigious Scientific Advisory Board as the company embarks on the research and development of a phytocannabinoid based HIV TAT inhibitor. Dr. Bray has significant expertise in clinical development and market positioning for novel drugs.

**Dr. Michael J. Goldblatt** .Dr. Goldblatt, the Former Director of Defense Sciences at the Defense Advanced Research Projects Agency (DARPA), holds extensive experience in successfully pioneering next-generation technologies, including host-oriented therapeutics for infectious disease. He received his B.A. in Biology from Reed College and his Ph.D. and J.D. from the University of California-Davis and is admitted to practice law in New York and Washington, D.C. and with the United States Patent Bar.

Dr. Goldblatt is also the President and CEO of Functional Genetics, a privately held biotechnology Company founded

in 2001 ([www.functional-genetics.com](http://www.functional-genetics.com)). Functional Genetics focuses on the development of new antibody-based therapeutics to prevent and treat a broad spectrum of viruses including HIV, Herpes, and respiratory illnesses. Functional Genetics' leading candidate FGI-101-1A6 is a fully human monoclonal antibody which targets and eliminates cells that have been infected by various viruses including HIV-1 and influenza. FGI-101-1A6 has successfully completed its Phase IA clinical trial.

Dr. Goldblatt has over 20 years of experience working in biotechnology, product development, and regulatory affairs. He served as the Science and Technology Officer at McDonald's Corporation and Director of Scientific and Regulatory Affairs at General Foods Corporation. Dr. Goldblatt has extensive knowledge and experience in the identification and commercial development of early stage technologies.

**Dr. Alan Shackelford** .Dr. Alan Shackelford is a graduate of the University of Heidelberg School of Medicine in Heidelberg, Germany and completed his postgraduate medical training at major teaching hospitals of the Harvard Medical School, including a residency in internal medicine and clinical Fellowships in nutritional and behavioral medicine as well as a Harvard Medical School research fellowship. Dr. Shackelford's interests are wide-ranging, and include the investigation and study of the medical uses of cannabis as well as applying principles of behavioral medicine to the treatment of stress-related illnesses, obesity, insomnia and tobacco dependence.

He has advised legislators in Colorado and Connecticut on the medical uses of cannabis during deliberations on bills establishing and regulating medical use of cannabis, has testified a number of times before state senate and house committees in Colorado and Connecticut on the medical uses of marijuana and serves on the Colorado Department of Revenue Medical Marijuana Advisory Work Group and a similar group advising the City and County of Denver. Dr. Shackelford is principle physician of Amarimed of Colorado, a medical practice devoted to the study and evaluation of cannabis as a medical treatment option.

**Dr. William L. Courtney.** Dr. William Courtney, in addition to holding a B.S. in Microbiology and M.D. degree, has a Post Doctorate in Forensic Examination and Forensic Medicine. He is a member of the International Cannabinoid Research Society, the International Association of Cannabis as Medicine, and the Society of Clinical Cannabis. Dr. Courtney teaches Continuing Medical Education (CME) courses in clinical cannabis, and a Survey Course on



Endogenous Cannabinoid System, and hosted the Second International CB2 Conference in California.

**Dr J. Thomas August** . Dr. August's distinguished career in clinical research directed at the molecular biology and protein structure of RNA viruses, and clinical exploration of human immunology has positioned him as a leading authority on human immune response mechanisms.

Dr. August currently holds the positions of a University Distinguished Service Professor of Pharmacology and Molecular Sciences, and Oncology at The Johns Hopkins University School of Medicine, Professor of Medicine, National University of Singapore; and Professor, Perdana University Graduate School of Medicine, Malaysia.

Dr. August has been involved with the development of a new generation of HIV vaccines and the protein antigenic structure of leading viral pathogens, including HIV-1, influenza, and other pathogens including dengue and West Nile viruses. His numerous publications are reflective of scientific commercial enterprises in cancer and HIV.

**Dr. Ritchard L. Fishman** .Dr. Fishman established his practice in 1961, and since then has been seeing patients of all ages for Diabetes, Hypertension, Weight Loss, Arthritis, Pain Management and many other medical problems. Dr. Fishman is widely recognized as a leader in the research in these fields. Since 1998, Dr. Fishman has been involved in clinical trials for medications, treatments, devices and vaccines for major pharmaceutical companies seeking FDA approval. Dr. Fishman is also a Chairman of the New Life Diabetes Center's Medical Review Board and is responsible for reviewing all medical operations supervised by this Center. Dr. Fishman graduated Ohio State University in 1953 where he earned a Bachelor of Science degree with a Major in Biology. He also received his Medical Doctor degree from Ohio State University in 1957. Dr. Fishman has professional affiliations with the Downey Community Hospital, Whittier Presbyterian Hospital, and Whittier Hospital. Also, he has been a guest lecturer with the Western University School of Osteopathic Medicine and Senior Medical advisor for New Life Diabetic Centers in California and Nevada.

