

**Submission
No 53**

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

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Submission to the NSW State Government

Inquiry into the use of Cannabis for medical purposes.

I thank the Standing Committee for reviewing the medicinal Cannabis issues and have due respect for the committee members abilities to diligently consider the information provided and act with a responsible attitude towards determining the most desirable outcome based on sound evidence and logical principles.

Summary. This submission addresses supply, legalities and related issues. The information is provided to the Standing Committee for determining if, and how, Cannabis or approved preparations could be supplied to registered patients, the legal implications of Cannabis use for medical purposes, as well as other related issues concerning the plant. There are sections which provide information and opinion on the key points and their consequences in brief terms.

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1. Introduction

Cannabis prohibition has limited the research into the use and effects of the plant. Research material on the efficacy of Cannabis as medicine is restricted by the illegality of possession and supply. The available material is yet to convince the US Department of Justice or in particular the Drug Enforcement Administration who continue to insist that Cannabis has a high potential for abuse, has no acceptable medical use and is unsafe under supervision.

Since the previous inquiry conducted by the NSW Government there have been many changes to the local laws around the world and particularly in the USA when Washington State and Colorado voters decided to allow limited recreational use. 19 of the United States and the District of Columbia now have medical 'marijuana' legislation with many more poised to follow for both medical and personal use.

A recommendation from the previous NSW Inquiry states; "Given evidence that patients with some of the conditions indicated are currently using smoked Cannabis for therapeutic reasons, the Working Party has recommended a regime for limited compassionate provision of Cannabis to patients who may benefit from its use. [1]"

2. Endocannabinoid System

< [2] Endocannabinoids are marijuana-like compounds that are produced by most animals, including all vertebrates. The endocannabinoid system has an all-pervasive role in maintaining homeostasis (biochemical balance). An abundance of peer-reviewed publications indicates that stimulating the endocannabinoid system benefits many medical conditions.

Phytocannabinoids, also called natural cannabinoids, herbal cannabinoids, and classical cannabinoids, are only known to occur naturally in significant quantity in the Cannabis plant. They are concentrated in a viscous resin that is produced in glandular structures known as trichomes, and are most prevalent in the flowers of the female plants.

Cannabinoid receptors in the human body were not discovered until 1990. CB1 receptors are found primarily in the brain, specifically in the basal ganglia and in the limbic system, including the hippocampus. They are also found in the cerebellum and in both male and female reproductive systems.

CB1 receptors appear to be responsible for the euphoric and anti-convulsive effects of Cannabis.

Cannabinoid pharmaceuticals, unlike many other pharmaceutical compounds, do not represent a risk factor for respiratory or cardiovascular failure. Cannabis has been called one of the safest drugs known by US Federal Judge Young in 1977. In fact, there is no known lethal dose of Cannabis. It has an estimated therapeutic index of 40,000 to one as compared to aspirin with a therapeutic index of 15.

CB2 receptors are found almost exclusively in the immune system, with the greatest density in the spleen. CB2 receptors appear to be responsible for the anti-inflammatory and possibly other therapeutic effects of cannabis.

The endocannabinoid system refers to a group of neuromodulators and receptors involved in a variety of physiological processes including appetite, pain sensation, mood, and memory. The system is named for endocannabinoids, the endogenous lipids that bind cannabinoid receptors (the same receptors that mediate the psychoactive effects of Cannabis).

Science increasingly recognises the role that endo-cannabinoids play in almost every major life function in the human body. Cannabinoids act as a bio-regulatory mechanism for most life processes, which explains why medical Cannabis has been recommended as a treatment for many diseases and ailments in anecdotal reports and scientific literature. Some of these ailments include: Pain, arthritic conditions, migraine headaches, anxiety, epileptic seizures, insomnia, loss of appetite, GERD (chronic heartburn), nausea, glaucoma, AIDS wasting syndrome, depression, bipolar disorder (particularly depression-manic-normal), multiple sclerosis, menstrual cramps, Parkinson's, trigeminal neuralgia (tic douloureux), high blood pressure, irritable bowel syndrome, and bladder incontinence.

Cannabinoids were first discovered in the 1940s, when CBD and CBN were identified. THC was not identified until 1964, but by that time Cannabis had been removed from the pharmacopoeia of most countries, making further research on the plant difficult. />

Considerations

The psychoactive, non-psychoactive parts of the plant and the nutritional properties of Cannabis seed, all have medical uses for the prevention and cure of many diseases, although the evidence is still legally denied. The current legislation for Cannabis seed as food for humans and as stock feed, is inhibiting growth of the industry by imposing severe regulations on the THC levels of 'hemp' that hinder the viability of cultivation and investment in establishing or adapting the infrastructure required for large scale production.

Carbon sequestration and the hemp fibre production potential, would be made more attractive with State and/or Federal concessions and subsidies for industrial hemp farmers. The need for medical Cannabis or the chemical substitutes from drug manufactures, would be reduced over-all by a nutritious diet and thus prevent many diseases via a stronger and healthier immune system.

All Cannabis use is of a medicinal nature.

3. Hemp seed nutrition

[3] "Albumin, a globular protein, and edestin, a legumin, are the two main proteins in hemp seed and both are rich in the amino acids that are essential to human health. A direct comparison of protein amino acid profiles from egg white, hemp seed and soy bean shows that hemp seed protein is comparable to these other high quality proteins. Hemp seed protein has good amounts of the sulphur-containing amino acids methionine and cystine, in addition to very high levels of arginine and glutamic acid.

As an industrial source of vegetable nutrition, both hemp seed and hemp seed meals are rich sources of protein and polyunsaturated oils, in addition to considerable amounts of vitamins and useful minerals."

"The seed oil of *Cannabis sativa* L. is typically over 90% in unsaturated fats. Hemp seed oil, pressed from

non-drug varieties of *Cannabis* seed, is an especially rich source of the two Essential Fatty Acids, linoleic acid (18:2 omega-6) and alpha-linolenic acid (18:3 omega-3), in addition to their respective biologic metabolites, gamma-linolenic acid (18:3 omega-6) and stearidonic acid (18:4 omega-3)."

"Recent feeding trials with fish, hens and ruminants, in addition to empirical observations over thousands of years, have effectively demonstrated that hemp seed and its derivatives are useful in animal feed. Subjective concerns over THC in hemp foods are not supported by scientific evidence."

4. Cannabis Prohibition

The State funded 'Cannabis Eradication Program' has inadvertently maintained the exorbitant price of Cannabis, which fuels the black market and provides the incentive to cultivate the plant for profit. Indoor and hydroponic Cannabis has helped to evade detection and all methods will continue until Cannabis can be produced lawfully. The large 'Carbon footprint' that indoor and hydroponic cultivation creates, is in addition to the expense of law enforcement and legal proceedings in financial and productivity terms.

Claims of reducing supply and removing Cannabis from the hands of 'criminals' by the efforts of NSW Police are a vain attempt to justify the eradication program but neglect to identify the social impact, lost productivity and the continued contempt for a law that has failed to work. Especially from people who have experienced the benefits of Cannabis for treating their diseases or witnessed the positive results of others who have used Cannabis for treatment in individual cases. And from people who perceive the use of 'recreational' Cannabis to be less of a health concern than alcohol and both legal or illegal chemical drugs.

Realistically, trying to enforce Cannabis prohibition with no great success in over thirty years, is a waste of time and money. The question is, 'what are the beneficial impacts of trying to enforce prohibition?'. The consequences of Cannabis prohibition are far more dangerous and harmful than the effects of the plant particularly concerning medical treatment or therapy. The cost of enforcing Cannabis prohibition plus the potential tax revenue from legal sales amounts to hundreds of millions of dollars each year in NSW.

5. General Information

It's difficult to gauge how well informed each member is about the ongoing developments in legislation around the world on issues related to Cannabis and how well other submissions have covered particular aspects of the situation. There is an exhaustive amount of information from the English speaking countries that are easier for me to consider before attempting to search any further. Mainstream media has recently provided more positive news about the use of 'marijuana' from the USA in particular since their election. The level of acceptance for medical marijuana is growing steadily and the positive results with the treatment of many different ailments continue to attract more support for legal access to medical supplies. Information from smaller or independent news services and blogs etc., doesn't receive the same size audience but the information is still in circulation yet has a lower regard of authenticity. The collective information certainly provides an abundance for those who search for it. A digest of some key points are provided.

USA

[4] Throughout my career as a clinical psychiatrist, I have seen lives ruined by drugs like cocaine, painkillers and alcohol. I have also borne witness to the devastation brought upon cannabis users -- almost never by abuse of the drug, but by a justice system that chooses a sledgehammer to kill a weed. Alcohol, tobacco, marijuana, caffeine and refined sugar are among the most commonly used, potentially habit-forming recreational substances. All are best left out of our daily diets. Only marijuana is illegal, though alcohol and tobacco are clearly more harmful. In several respects, even sugar poses more of a threat to our nation's health than pot.

Israel

[5] Among the rows of plants growing at a government-approved medical marijuana farm in the Galilee hills in northern Israel, one strain is said to have the strongest psychoactive effect of any cannabis in the world. Another, rich in anti-inflammatory properties, will not get you high at all. The plantation, Israel's largest and most established medical marijuana farm — and now a thriving commercial enterprise — is imbued with a higher sense of purpose, reflected by the aura of Safed, an age-old center of Jewish mysticism, as well as by its name, Tikkun Olam, a reference to the Jewish concept of repairing or healing the world.

Professor Mechoulam deciphered the cannabinoids native to the brain. Ruth Gallily, a professor emerita of immunology at the Hebrew University of Jerusalem, has studied another main constituent of Cannabis — cannabidiol, or CBD — considered a powerful anti-inflammatory and anti-anxiety agent.

Latin America

[6] Leaders from across Latin America responded within days of the Colorado and Washington vote, demanding a review of drug-war policies that have mired the region in violence. Latin American decision-makers are now openly questioning why they should continue to sacrifice police and soldiers to enforce drug laws when legal markets for marijuana now exist in the USA.

“Everyone is asking, what sense does it make to keep up such an intense confrontation, which has cost Mexico so much, by trying to keep this substance from going to a country where it’s already regulated and permitted?”

Portugal

[7] Portugal decriminalised possession of all drugs in 2001. The outcome, after nearly a decade, according to a study published in the November issue of the British Journal of Criminology: less teen drug use, fewer HIV infections, fewer AIDS cases and more drugs seized by law enforcement. Adult drug use rates did slightly increase — but this increase was not greater than that seen in nearby countries that did not change their drug policies. The use of drugs by injection declined.

US Patent

[8] The US Government owns a patent on the use of Cannabinoids as antioxidants and neuroprotectants, although they continue to keep the plant classified US Schedule One, reserved for drugs with the highest potential for abuse and no medicinal use. Claims of 'undesired psychotropic side effects' as a justification of denying the use of Cannabis preparations, is certainly harshly discriminatory and ignores the benefits of the plant for chronically ill patients who have few or no acceptable alternatives for relief or improving their quality of life.

International Treaty

Australia is a signatory to 'The Single Convention on Narcotic Drugs'. Cannabis is currently classified as a narcotic, which is an imprecise definition. The many other uses of the Cannabis plant for food, bio-fuel and industrial fibres, places Cannabis in a category of its own and only bundled with opiates and their derivatives, for the convenience of law enforcement and as a result of ignorance on behalf of legislators.

" [9] The Single Convention repeatedly affirms the importance of medical use of controlled substances. The Preamble notes that "the medical use of narcotic drugs continues to be indispensable for the relief of pain and suffering and that adequate provision must be made to ensure the availability of narcotic drugs for such purposes". Articles 1, 2, 4, 9, 12, 19, and 49 contain provisions relating to "medical and scientific" use of controlled substances. In almost all cases, parties are permitted to allow dispensation and use of controlled substances under a prescription, subject to record-keeping requirements and other restrictions."

Sativex Trial

Recently the National Cannabis Prevention and Information Centre (NCPIC) conducted a trial with Sativex to treat the 'withdrawal symptoms' allegedly caused by Cannabis use or 'abuse' [10].

A program using Cannabis to treat Cannabis was a ridiculous idea. The trial proved itself to be a waste of resources and displayed ignorance on behalf of NCPIC. The unsubstantiated claims and misinformation that is produced by the NCPIC is a great disservice to the Australian community and a shameful disregard of the history of the plant.

'Reefer Madness' is alive and well at the NCPIC where fiction is presented as fact. The organisation should be dissolved and those responsible for the deception and the distortion of the facts, should be charged with treason. Treating Cannabis withdrawal is a misnomer. Follow the money trail and ask yourself why an imported product made from Cannabis is even considered as a cure for its use. Sativex is alcohol based and contains peppermint oil which has health concerns over the biological absorption of elements. Discriminating between the local garden variety and imported British factory produced Cannabis oral spray, defies logic.

Prohibition Comparison

Professional athletes are under pressure to perform and retain their place among peers. Performance enhancing drugs that are on the banned list provide an unfair or illegal advantage to the athletes who are tempted to use them. Prohibited substances provide the highest return for unscrupulous suppliers who can persuade complicit sports officials to turn a blind eye. Prohibited performance enhancing drugs continue to defy testing methods and the law due to the financial incentive. Popular illegal substances will find a way to evade prosecution and continue to require expensive methods of law enforcement.

Compared to Cannabis, all performance enhancing substances pose a serious health risk due to their potential to cause injury to vital organs and biochemical reactions that are beyond the understanding of common medical practice and their creators circumvent adequate testing of their chemical structure. Cannabis has an extremely low level of toxicity, is considered benign and can enhance the performance of pain sufferers and the chronically ill.

6. Health Aspects

According to Judge Francis Young of the US Drug Enforcement Administration, "cannabis is one of the least toxic substances known to man, less toxic than raw potatoes.". The scientific measurement of toxicity is the therapeutic ratio – effective dose:lethal dose. The therapeutic ratio of alcohol is 1:20, of aspirin 1:35, of cannabis between 1:20000 and 1:40000 [11].

Addiction Claims

Psychological addiction to Cannabis is no more harmful than other psychological addictions such as sex, shopping or gambling. There is no physical addiction to Cannabis. Problems arise from the price of a habit and the consequences of prosecution and criminal charges. Cannabis dependencies are attributed to the euphoric state of mind that is associated with the reward system of the brain. Pleasure isn't addictive, it's just a desirable state of mind. Too much desire to be happy can be based on other psychological or physical health issues that are not being addressed or not yet diagnosed. Blocking out issues is for some people, the only relief that they can find or afford and postpones treatment.

Post Traumatic Stress Disorder

Stress is a factor for other health conditions. Cannabis is recommended to US war veterans who are diagnosed with PTSD in the States that have 'medical marijuana' legislation. The Department of Veterans Affairs says that as a federal agency its doctors can't recommend using it. There are many cases where Cannabis is successful treatment compared to the chemical alternatives or anti-depressants.

Cancer

There are many reports about Cannabis for treating common forms of cancer. Basal cell carcinomas, a form of skin-cancer, has responded successfully to Cannabis preparations. Colorado based 'Cannabis Science' has claimed and has documented cases where forms of cancer have been cured [2]. Australians have a high rate of skin cancer and will benefit from treatment when Cannabis products are made available.

Psychosis

The definition states that psychosis includes a wide variety of central nervous system diseases, from both external substances and internal physiologic illness, that can produce symptoms of psychosis. The illegality of Cannabis and the unregulated supply contributes to risk that some people may take from lack of understanding the consequences of consumption and the lack of professional treatment for diagnosing a predisposition to psychosis symptoms. The endocannabinoid system maintains a biochemical balance which suggests that Cannabis treatment for psychosis has great potential as cure for the disease in most cases. The reverse of some other currently held 'beliefs'. The incidence of psychosis has not directly increased in proportion to the use of Cannabis. Subjective concerns over possible harms are based on limited research. You can't test Cannabis because it's illegal and it's illegal because of the lack of 'credible' research evidence. Information from the research of all mental and physical conditions treated with Cannabis or derivatives will become more comprehensive when prohibition is repealed.

Cannabis as a substitute

[12] A small Canadian survey determined that the three main reasons cited for Cannabis-related substitution are less withdrawal, fewer side-effects, and better symptom management, suggesting that many patients may have already identified Cannabis as an effective and potentially safer adjunct or alternative to their prescription drug regimen.

Trends in diagnosed schizophrenia

[13] The UK Advisory Council on Misuse of Drugs commissioned a study by Keele University into the trends in schizophrenia specifically to test the claims in the media of a link between mental health and Cannabis. It looked at almost 600,000 patients and concluded that “.the incidence and prevalence of schizophrenia and psychoses were either stable or declining” despite ongoing and increased use of allegedly more potent Cannabis.

First resort

Often you hear that Cannabis could be prescribed as a last resort when the first line of treatment fails or causes undesirable side-effects. Due to the safety and efficacy of Cannabis or its derivatives, the first option logically would be Cannabis. Death or perceived dangers are more commonly associated with chemical drugs which are only considered because they are easier to control, and the supply comes via existing sources or chemical drug manufacturers that have a long history of being opposed to Cannabis legalisation because it's a threat to their business or the profits obtained from their products. Clearly, this method of protecting suppliers at the expense of patients health or quality of life, is a long way from healing and compassionate care. The first choice of medication must be the best one for the patient. Again, the lack of legal research and acceptance of Cannabis as medicine is the root of the problem due to prohibition.

Child safety

Most parents are hard-wired to care for their children. When it comes to a child's health, the parents become very concerned when standard medications or procedure fails to improve or worsens their child's condition. Similar emotionally driven decisions apply within families when it comes to finding relief from pain, cancer, epilepsy and conditions that cause wasting from lack of appetite as a result of prescription drugs. Family members seek any alternative in the hope that it will improve their loved-ones condition.

Searching the internet, or witnessing improvement first hand, provides plenty of information on the use of Cannabis or its derivatives for treating common and obscure conditions. People discover that their child or grandparent could benefit greatly with some 'medical marijuana'. They seek out a source of Cannabis and have more concern about the health of their family than respect for the law. They read about the success of

Cannabis in treating a sickness or disease that somebody they know has died from and become angry and frustrated that Cannabis products are unavailable because of prohibition. Families suffer under these circumstances much more than they would if there was no known cure or therapy available.

People lose faith in our medical and justice system because it contributed to the suffering or death of somebody they loved. Suffering children and the elderly deserve the best treatment available. Whatever perceived risks are involved with psychoactive substances for needy patients, are far less than their needs for compassionate care. It's a crime to watch somebody suffer and deprive them of health, whatever their age. There is no lethal dose and Cannabis is non-toxic which makes it very safe for children under supervision.

Driving under the influence

The new laws for 'marijuana' in Washington State have set the 'accepted' level for driving under the influence at a level that will be virtually impossible to comply with, for the medical marijuana patients who have legal state access. The level of 5 ng/mL is an unnecessary stipulation and potentially could make patients more dangerous on the road than when driving with their required dosage. Road safety is an important issue but there are some studies that suggest Cannabis improves driving skills in some people. As the new US legislation produces statistical data, we will have more accurate findings than are currently available.

Individual metabolism determines the 'safe level of intoxication' as we see with alcohol. It would seem that the cost of enforcing 'safe limits' and the court proceedings, are a greater burden than the potential danger of 'marijuana DUI' on our roads. Driver awareness of safety levels can be part of the basic training and driver's licence tests.

As far as recreational or personal use of Cannabis is concerned in a legal environment, the consumption of alcohol could potentially be reduced as a result of people preferring Cannabis instead, which would be a factor in reducing alcohol related road accidents, alcohol related diseases and social costs. The transition from a drunken culture to 'high' culture poses many hypothetical questions concerning health issues and social welfare.

7. Products and Research

Sativex [14] is now under schedule 8 of the Poisons Standard (nabiximols). Sativex is a botanical extract of Cannabis approved for use as an oral spray. GW Pharmaceuticals grows high quality Cannabis under pretty much the same conditions as most illegal 'indoor' growers. It uses clonal propagation to ensure consistent levels of cannabinoids. Lighting and hydroponic nutrition is computer controlled with automatic ventilation. It really is no different from the most sophisticated and efficient illegal Cannabis farms. Alta California offers three varieties of a Sativex-type tincture with different cannabinoid ratios for different purposes. There is no honest or accurate way to describe Sativex except to say that it is Cannabis.

"Sativex has proven to reduce the severity of symptoms and improve patients' quality of life and functional status, in patients with spasticity in multiple sclerosis, meaning that they can undertake everyday tasks more easily. Also, importantly, clinical experience to date has demonstrated that the tolerability profile of this medicine is favourable, with limited relevant adverse effects and – particularly reassuring – the drug does not appear to lead to withdrawal effects if patients suddenly stop using it. (Professor H.P. Hartung , *Chair of Neurology at Heinrich-Heine University, Dusseldorf, Germany*)"

Bedrocan [15] is supplied by the Netherlands Government. Bedrocan is dried Cannabis flowers in a pill container. The Dutch program and the more liberal laws on personal use, are an example of how the Cannabis issue is approached by cosigns of the international treaty concerning the plant.

KannaLife [16] is a socially responsible, phyto-medical company specializing in the research & development of pharmaceutical products derived from botanical sources, designed to reduce oxidative stress, and act as immuno-modulators and neuroprotectants.. KannaLife now have an exclusive license agreement with National Institutes of Health – Office of Technology Transfer ("NIH-OTT") for the Commercialization of U.S. Patent 6,630,507, "Cannabinoids as Antioxidants and Neuroprotectants"

Tincture [17] "The Tincture from Mullaways Medical Cannabis Pty Ltd has been tested by both the NSW Police and NSW Health and no Prohibited Drugs were detected."

Marinol [18] (dronabinol) is the only US FDA-approved synthetic cannabinoid. It is often marketed as a legal pharmaceutical alternative to natural cannabis. Chemical compounds in Cannabis, known as cannabinoids, are responsible for its numerous therapeutic benefits. Scientists have identified 66 naturally occurring cannabinoids.

The active ingredient in Marinol, synthetic delta-9-tetrahydrocannabinol (THC), is an analogue of one such compound, THC. However, several other cannabinoids available in Cannabis -- in addition to naturally occurring terpenoids (oils) and flavonoids (phenols) -- have also been clinically demonstrated to possess therapeutic utility. Many patients favor natural cannabis to Marinol because it includes these other therapeutically active cannabinoids.

ProCon [19] There is a lack of information from Australian based organisation concerning the 'pros and cons' of medicinal Cannabis. The US based website ProCon.org provides respected and comprehensive information.

Professor David Nutt [20] formerly on the UK Advisory Council on the Misuse of Drugs, who was sacked over his recommendations to the British Government concerning the relative harms of a list of legal and illegal substances, continues to conduct research with Independent Scientific Committee on Drugs in the UK. The ISCD is the leading independent scientific body on the harms and benefits of both legal and controlled drugs in the UK. There are many points to consider about Cannabis via the ISCD website.

Australia21 [21] is an independent, non-profit organisation whose core purpose is multidisciplinary research and inquiry on issues of strategic importance to Australia in the 21st century. Australia21 aim to promote the development of new frameworks of understanding which lead to better policy decisions about the questions that challenge Australia's future.

8. Supply Issues

Currently, 'black market' prices for Cannabis are totally unregulated and transfer enormous quantities of cash to the hands of illegal dealers and criminal enterprises. The cost of producing Cannabis of desirable quality is far cheaper than the exorbitant prices obtained under prohibition. Cannabis could be produced at similar costs to other crops such as parsley or any common herb. Illegal Cannabis sales fetch between 5 to 25 dollars per gram or more specifically, 5 to 25 million dollars per tonne. The money returns into circulation via the pocket of a 'drug dealer' that has no responsibility for the 'product' or any income tax on profits. The quality control and responsibility of Cannabis supplied for medicinal or recreational purposes remains unchecked and suppliers are unaccountable.

Classification

If medicinal Cannabis is treated separately, then the illegal market for recreational Cannabis will remain. If State and Federal laws for Cannabis are different, then we can expect similar legal issues as they experience in the USA where State laws are superseded by Federal law. Any State of Australia would find similar difficulties with Cannabis law reform where it conflicts with Federal legislation.

Decriminalisation fails to address medical supplies to patients and continues to treat all use as an offence in only shifting from criminal law to civil law. The grey area between medical and recreational use, or the notion that all use is of a medical nature, makes it infeasible and problematic to try and distinguish between the two. Successful legislation to address medical needs will have to cater for personal use and self medication. Doctors or medical professionals who recommend or prescribe Cannabis must be as responsible as with other medications that they administer.

Small scale patient cooperatives and dispensaries in the USA are hindered by the conflict in Federal and State legislation. If Australian Federal law conflicts with NSW legislation, then the legitimacy and supply of Cannabis products will be without the federally funded Therapeutic Goods Administration (TGA) who ideally would have the same control over Cannabis preparations as with other similar registered medications in Australia. Federal and State laws will have to be consistent to avoid legal battles and to provide some

security on capital investments. Conducting clinical trials will remain illegal until Cannabis is rescheduled under the Poisons Standards or an exemption that applies to a particular group or individual.

GST is one method of collecting revenue from medicinal products. And also State excise or similar to alcohol and tobacco regulations at a State level. Too many taxes and regulations on medicine would still indirectly provide incentive for illegal trade, as it would for recreational supply. There must be some provision for 'home grown' cultivation for all practical purposes of the plant including industrial hemp varieties.

Rescheduling Cannabis would solve many legal issues concerning supply. Standard income tax would apply for any profits derived from the supply of Cannabis food, fuel, fibre, cosmetics, medicine or recreational products.

Food products would list the nutritional value of hemp seed protein, oil and omega-3 etc. Health warnings would be required on packaging if Cannabis is sold similarly to tobacco or alcohol. Although the relative harm concerns with Cannabis are considerably less than either tobacco or alcohol. Registered brand names of Cannabis products would help maintain a quality standard and reputation as they do for other consumer items. Economy of scale for production and consumer demand for medical, industrial or recreational Cannabis will determine the current price, as with other commodities.

There would be a period of a few years before any form of production achieved efficiency and developed adequate procedure for compliance to any new legislation. The time required for conducting trials under current restrictive laws would further delay any supply to medical patients in particular.

The costs of compliance will be greatly reduced when Cannabis is reclassified as a herb with benign medicinal properties. Any minor concerns about THC or psychoactive properties are strongly outweighed by the many other therapeutic benefits and industry potential from the entire Cannabis species.

Investment

Industrial hemp products including the nutritious hemp seed will provide the greater source of capital gain when the infrastructure is in place to supply hemp based alternatives to soy bean, dairy, wood-pulp, cotton,

coal, aggregate, bio-fuel and plastics etc. Overtime hemp as a natural resource could take its place among the other listed commodities. Offsetting Carbon-dioxide emissions with hemp plus the production of raw materials would make the hemp industry attractive to venture capital and private equity. Medical supplies of Cannabis is a smaller potential market compared to the industrial potential of the plant.

Genetically modified varieties of Cannabis species for medical or industrial purposes is another area of concern. Analysis on registered varieties for medical supplies will provide a more consistent dosage.

Industrial hemp with terminating seeds that are patented by large corporations with expensive legal teams may create similar issues to the viability and legal access to medicinal and industrial seed varieties of the Cannabis species, as there is with corn and soy bean GM crops particularly in the USA.

Location

Climatic conditions will determine the viability of Cannabis cultivation. Cooler climates with a short growing season are more suitable to seed production, processing and storage of whole seed, oil and seed meal.

Tropical regions would produce more biomass and could be in rotation with sugar cane to share existing infrastructure. Blended hemp and cotton fibres are already available for clothing etc.. Australia's cotton and wool industries would provide other areas for integrating industrial hemp processing.

An enterprise that supplies a combination of Cannabis raw materials and/or products derived from local seed would be the most viable method for continuation. Regional hubs for cheap and efficient processing have the potential for creating long term employment. Ultimately supply and demand determines the viability of any industry.

As an example 'Cubbie Station' is a Queensland cotton farm recently purchased in part by the Chinese Government. As the world's largest producer of industrial hemp, the Chinese could well be considering hemp cultivation using the existing or modified infrastructure of Cubbie Station to continue cotton production, which uses more water and has a high demand for nutrients, and also fibre crops like hemp to diversify their investment and approach hemp cultivation on a grand scale.

There was a recent proposal to invest in the 'Top End' of Australia, which is another area of enormous potential for industrial hemp cultivation and manufacturing.

The Canadian Government has continued to benefit from their local hemp industry that takes advantage of the US law which prohibits cultivation, but permits the human consumption of hemp seed foods. The US imports most of their hemp seed products from Canada.

Beyond prohibition when there is a legal supply of all forms of Cannabis, we can expect to see medical supplies overshadowed by the profitability of supplying industrial hemp related products. In comparison, medical supplies of Cannabis could be produced on a very small area of land.

Medical Standard

Cannabis cultivated for medical supplies requires more intense scrutiny than recreational or hemp crops. Quality control for pests and insects, mould and other contaminants that pose as a health risk, will require a standard practice or procedure to protect consumers and maintain consistency.

Particular strains or varieties are suited to particular medical treatments. The THC:CBD ratio is a major factor in the suitability of a particular variety for its effectiveness as a treatment. Registered varieties of Cannabis species with predetermined attributes, would ensure more consistency in the properties of medical products.

Methods of cultivation that have high energy requirements such as 'indoor' crops with electric lights, fans, irrigation and sophisticated computer monitoring, would add considerably more to the cost of production.

The growth hormones used for cuttings or 'clones', chemical fertilisers, growing medium or potting mix and other methods used to control pests and diseases are all factors that affect the overall quality of the crop.

Climatic conditions determine the viability of all crops. Between Darwin and Hobart, there are many seasonal variations. NSW contains many micro-climates that will provide variations in the quality, cultivation and processing requirements. Cannabis cultivated with common 'outdoor' methods will produce a crop that has unique regional characteristics, as we see with fruit and vegetables. Determining the appropriate strains for a particular region or micro-climate will be an educated guess or trial and error.

Cannabis certified as organic could possibly be the first choice for medical supplies due to the demand for preparations that are described as 'holistic' or consistent with herbal medicine lore or tradition. Cannabis belongs with other therapeutic goods commonly found at a herbalist or apothecary. Dispensaries that already provide herbal remedies are ideally suited to dispensing medical Cannabis preparations, such as tincture, salves and essential oils. The current legislation controlling herbal preparations can include medicinal Cannabis to the list and adequately maintain common safeguards for distribution. The TGA already have the methods of analysing the properties of herbal preparations and can easily apply the same procedure to medicinal Cannabis preparations.

New legislation for Cannabis as a medicine will be formulated by observing the methods used primarily in the USA and Canada where there are already methods of production and distribution. Patient identification cards are commonly used to verify the patient and their medical conditions. The suitability for Cannabis, as a treatment for a patient's particular disease or illness, is an area of contention due the medical status of the plant, peer-reviewed accepted medical conditions where Cannabis is suitable and in the USA where State and Federal laws are in conflict.

The suitability of administering Cannabis or preparations will be determined by the results of treatments. A Doctor may have a different opinion to that of a Naturopath when prescribing or recommending a treatment. Again it will be necessary to observe the practices and results from other countries to compile a list of diseases and illnesses that are suitable for treatment with Cannabis or preparations.

I would expect that forming any new legislation will need to consider a growing list of ailments that are showing a high degree of successful treatment using Cannabis in any form. As with chemical alternatives to natural substances used for treatment, new research and medical records will produce accurate data on what is appropriate practice and recommended procedure.

9. Recommendations

- Remove Australia as a signatory of 'The Single Convention on Narcotic Drugs' in regard to Cannabis and all products made from the plant.
- Declassify the entire Cannabis plant as a controlled substance.
- Allow the consumption of hemp seed products for humans and as stock feed.
- Subsidise industrial hemp farming with tax concessions and low interest long term finance and follow guidelines established by the NSW Department of Primary Industries [22].
- Remove restrictions on personal use for medical and recreational purposes.
- Acknowledge the therapeutic properties of Cannabis.
- Allow research into the efficacy of all forms of Cannabis preparations by registered private businesses and Australian citizens.
- Control Cannabis, or preparations of the plant, for medical purposes, by authority of the Therapeutic Goods Administration and State Health Departments.
- Regulate the sale and quality of Cannabis to registered patients and their suppliers.
- Create a registry of patients receiving treatment with a Doctor's or a health professionals recommendation or prescription, or expand existing registries to accommodate the medical history of Cannabis treatment.
- Remove all previous Cannabis convictions.
- Compensate victims of Cannabis prohibition that have suffered their illness or disease because the current legislation has failed to observe the exceptions of the international treaty, ignored basic human rights and has denied the relief that Cannabis can provide to improve their quality of life.
- Develop a dispensary model for the sale and distribution of medicinal Cannabis and preparations to registered patients.
- Remove the 'black market' supply of medical and recreational Cannabis by reducing or limiting the potential profit of supplying illegal products, including 'synthetic cannabis', with the repeal of prohibition.

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11. Epilogue

This submission was compiled from my personal understanding of Cannabis issues. The internet provided the platform for research on the subject. I chose to write a submission without directly consulting, or sharing the actual content, with my colleagues from the Australian HEMP Party or the Nimbin HEMP Embassy. However, the opinions that I have developed are a result of my involvement in Cannabis law reform over an extended period and derived from my abilities as an editor of print publications and website content.

This submission contains my personal opinion, and is not necessarily to be considered as the shared views of the organisations that I am member of.

This submission to the NSW Inquiry into the use of Cannabis for medical purposes, is provided to the Standing Committee with information that can be expanded upon or explained further if required.

I again, thank the Committee Members for examining the medical Cannabis issues and for considering all the information provided in this document.

Mr. James Kingsbury

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