

**WRITTEN TESTIMONY IN SUPPORT OF HOUSE BILL 6715:  
A BILL TO PROVIDE FOR THE MEDICAL USE OF MARIJUANA,  
BEFORE THE JOINT COMMITTEE ON JUDICIARY**

**By Paul Armentano  
Senior Policy Analyst  
NORML | NORML Foundation  
Washington, DC**

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I applaud the members of the Joint Committee on Judiciary for taking the time to hold this hearing regarding House Bill 6715, which seeks to shield qualified patients who use cannabis therapeutically with a doctor's recommendation from criminal prosecution. The physician supervised use of medicinal cannabis and cannabinoids is a scientific and public health issue. It should not be held hostage by the so-called "war on drugs" or by broader public policy disputes regarding the legalization of marijuana or other controlled substances for recreational purposes.

Personally, I grew up in Connecticut (Simsbury High School, Class of 1990) and have several immediate family members – including many great aunts and great uncles – living in state.

Professionally, I have examined the science surrounding the medicinal use of cannabis and cannabinoids since 1995, publishing more than 100 articles and white papers on the subject as the senior policy analyst for NORML (the National Organization for the Reform of Marijuana Laws) and the NORML Foundation. I also have worked as a consultant for London's biotechnology firm GW Pharmaceuticals (<http://www.gwpharm.com>) – the only company legally licensed in the world to cultivate medical cannabis and perform clinical trials on various preparations of oral spray cannabis extracts. These extracts are legally available by prescription in Canada as well as on a limited basis in Spain and the United Kingdom under the trade name Sativex.

Most recently, I researched, edited, and authored the booklet, "Emerging Clinical Applications for Cannabis and Cannabinoids: A Review of the Recent Scientific Literature" (2007, NORML Foundation), which summarizes over 140 clinical and preclinical trials assessing the use of cannabinoids to moderate various neurodegenerative diseases, such as Alzheimer's disease, amyotrophic lateral sclerosis, and multiple sclerosis. Copies of this booklet are included with my written testimony.

Modern research suggests that cannabis is a valuable aid in the treatment of a wide range of clinical indications. A recent meta-analysis published in the April 2006 issue of the *Journal of Ethnopharmacology* identifies more than 70 controlled clinical trials available in the scientific literature investigating the medical safety and efficacy of cannabinoids as therapeutic agents.[1] Results of these patient trials indicate that cannabis and its constituents possess therapeutic utility as antiemetics, appetite stimulants in debilitating diseases (e.g. cancer and AIDS), and as analgesic agents. Studies further indicate that cannabis provides symptomatic relief for multiple sclerosis, spinal cord injuries, Tourette's syndrome, epilepsy, and glaucoma, among other serious diseases.[2]

Published case studies as well as hundreds of preclinical studies in the scientific literature indicate that cannabis and cannabinoids also provide therapeutic utility for various other diseases, such as dystonia,[3] bipolar disorder,[4] fibromyalgia,[5] Crohn's disease[6] and other gastro-intestinal ailments,[7] as well as possess neuroprotective[8] and anti-cancer properties.[9] Animal data also demonstrate that cannabinoids may moderate the progression of certain auto-immune and neurological disorders,[10] such as multiple sclerosis,[11] Lou Gehrig's Disease,[12] Alzheimer's,[13] and diabetes,[14] and can stimulate neurogenesis.[15] Numerous animal trials, as well as one patient trial, also conclude that cannabinoids can halt the proliferation of various strains of cancer, including breast cancer[16], prostate cancer[17], and brain cancer.[18] Most recently, the first US-sponsored clinical trial assessing the efficacy of inhaled cannabis in nearly two decades reported that cannabis significantly reduced HIV-associated neuropathy, a painful nerve condition that often goes untreated by available analgesics.[19]

Many in the scientific and health community endorse legal access to the use of cannabis as medicine. More than 80 national and state health care organizations – including the American Public Health Association,[20] the American Nurses Association,[21] and the AIDS Action Council[22] – have passed resolutions backing patients’ access to medicinal cannabis under a doctor’s supervision. American physicians are also supportive – with nearly half of all doctors with an opinion on the subject supporting legalizing cannabis as a medicine, according to a recent national survey published in the *Journal of Addictive Diseases*.[23]

Public support for the physician-supervised use of medicinal cannabis is also high – with approximately 80 percent of US voters backing cannabis’ availability as a prescription medicine,[24] Locally, a recent poll of Connecticut voters reported that 83 percent of respondents favor “changing the law to allow people with cancer, AIDS, and other serious illnesses to use and grow their own marijuana for medical purposes, if they have the approval of their physicians.”[25]

Federal scientific reviews from several Western nations strongly support the legal use of medicinal cannabis. These include a 1998 report by Britain’s House of Lords Science and Technology Committee that concluded: “The government should allow doctors to prescribe cannabis for medical use. ... Cannabis can be effective in some patients to relieve symptoms of multiple sclerosis, and against certain forms of pain. ... This evidence is enough to justify a change in the law.”[26]

A 1999 review by the US Institute of Medicine (conducted at the request of the White House Office of National Drug Control Policy) added, “The accumulated data indicate a potential therapeutic value of cannabinoid drugs, particularly for symptoms such as pain relief, control of nausea and vomiting, and appetite stimulation,”[27] and recommended Congress immediately authorize single patient clinical trials whereupon subjects could legally use inhaled cannabis medicinally in a controlled setting.[28]

The Institute of Medicine also reviewed the medical efficacy of the FDA-approved synthetic oral THC drug Dronabinol (Marinol) and concluded it to have “poor bioavailability,” slow onset, and adverse effects such as “anxiety, depersonalization, dizziness, euphoria, dysphoria, [and] somnolence” in approximately one-third of patients who use it.[29] Authors noted that many patients prefer natural cannabinoids or inhaled cannabis over this legal alternative because they are fast-acting (allowing consumers to self-titrate the dose), less dysphoric, and, in general, provide greater therapeutic relief than synthetic THC. Many experts believe that the synergism of the multiple cannabinoids found naturally in cannabis is likely more efficacious than the administration of synthetic THC alone.[30]

More recently, an overview of cannabis’ medical efficacy conducted by the Canadian Senate’s Special Committee on Illegal Drugs in 2002 advised Parliament to revise federal regulations so that any “person affected by one of the following [medical conditions]: wasting syndrome; chemotherapy treatment; fibromyalgia; epilepsy; multiple sclerosis; accident-induced chronic pain; and some physical conditions including migraines and chronic headaches, whose physical state has been certified by a physician or an individual duly authorized by the competent medical association of the province or territory in question, may choose to buy cannabis and its derivatives for therapeutic purposes.”[31] Today, Canadians can legally choose between using natural cannabis, as authorized by Health Canada, or the natural marijuana extract spray Sativex.[32]

Eleven US states – Alaska, California, Colorado, Hawaii, Maine, Montana, Nevada, Oregon, Rhode Island, Vermont and Washington – have now enacted laws protecting authorized medical cannabis patients from state prosecution. These laws are operating as voters and legislators intended and abuses by the public are minimal. According to a federal General Accounting Office (GAO) report examining the implementation of statewide medical cannabis laws in Alaska, Hawaii, Oregon, and a handful of California counties: “Officials from over half of the 37 selected federal, state, and local law enforcement organizations we interviewed in the four states said that the introduction of medical marijuana laws had not greatly affected their law enforcement activities. In addition, none of the federal officials we spoke with provided information to support a statement that abuse of medical marijuana laws was routinely occurring in any of the states, including California.”[33] Reviews by the National Academy of Sciences Institute of Medicine

and others have also concluded that state medical cannabis laws have not altered adolescents' perceptions of the risk associated with the recreational use of marijuana.[34]

In closing, the goal of House Bill 6715 is not to sanction the use of cannabis by the general population. Rather it is to protect patients and doctors who recognize that cannabis has medical utility, and uphold the sanctity and privacy of the doctor-patient relationship. State laws already allow the medical use of many controlled substances, such as cocaine and morphine, which can be abused in a non-medical setting. Likewise, Connecticut law should also properly differentiate between medicinal cannabis and other controlled substances. As opined by the *New England Journal of Medicine*: "[A]uthorities should rescind their prohibition of the medical use of marijuana for seriously ill patients and allow physicians to decide which patients to treat." [35]

References:

[1] Mohamed Ben Amar. 2006. Cannabinoids in medicine: a review of their therapeutic potential. *Journal of Ethnopharmacology* 105: 1-25.

<

>

[2] Ibid.

[3] Roca et al. 2005. Cannabis sativa and dystonia secondary to Wilson's disease. *Movement Disorders* 20: 113-115.

<

>

[4] Ashton et al. 2005. Cannabinoids in bipolar affective disorder: a review and discussion of their therapeutic potential. *Journal of Psychopharmacology* 19: 293-300.

<

>

[5] J. Ludovic Croxford. 2003. Therapeutic potential of cannabinoids in CNS disease. *CNS Drugs* 17: 179-202.

[6] Jeff Hergenrather. 2005. Cannabis alleviates symptoms of Crohn's Disease. *O'Shaughnessy's* 2: 3.

<

>

[7] Di Carlo et al. 2003. Cannabinoids for gastrointestinal diseases: potential therapeutic applications. *Expert Opinion on Investigational Drugs* 12: 39-49. <

>

[8] Hampson et al. 1998. Cannabidiol and delta-9-tetrahydrocannabinol are neuroprotective antioxidants. *Journal of the Proceedings of the National Academy of Sciences of the USA* 95: 8268-8273. <

>

[9] Manuel Guzman. 2003. Cannabinoids: potential anticancer agents. *Nature Reviews Cancer* 10: 745-755.

<

>

[10] Carter et al. 2004. Medical marijuana: emerging applications for the management of neurologic disorders. *Physical Medicine & Rehabilitation Clinics of North America* 15: 943-954.

<

>

[11] Pryce et al. 2003. Cannabinoids inhibit neurodegeneration in models of multiple sclerosis. *Brain* 126: 2191-2202.

<

>

[12] Raman et al. 2004. Amyotrophic lateral sclerosis: delayed disease progression in mice by treatment with a cannabinoid. *Amyotrophic Lateral Sclerosis and Other Motor Neuron Disorders* 5: 33-39.

<

>

[13] Ramirez et al. 2005. Prevention of Alzheimer's Disease pathology by cannabinoids. *Journal of Neuroscience* 25: 1904-1913.

<

>

[14] Weiss et al. 2006. Cannabidiol lowers incidence of diabetes in non-obese diabetic mice. *Autoimmunity* 39: 143-51.

[15] Jiang et al. 2005. Cannabinoids promote embryonic and adult hippocampus neurogenesis and produce anxiolytic and antidepressant-like effects. *Journal of Clinical Investigation* 115: 3104-3116.

[16] Di Marzo et al. 2006.

*Journal of Pharmacology and Experimental Therapeutics Fast Forward (E-pub ahead of print).*

<

>

- [17] Sarfaraz et al. 2005. . Cancer Research 65:  
1635-1641. < >
- [18] Guzman et al. 2006.  
British Journal of Cancer (E-pub ahead of print). < >
- [19] Abrams et al. 2007. Cannabis in painful HIV-associated sensory neuropathy: a randomized placebo-controlled trial. Neurology  
68: 515-521.
- [20] American Public Health Association, Resolution #9513: "Access to Therapeutic Marijuana/Cannabis." The resolution states, in  
part, that the APHA "encourages research of the therapeutic properties of various cannabinoids and combinations of cannabinoids, and  
... urges the Administration and Congress to move expeditiously to make cannabis available as a legal medicine."  
<American Journal of Public Health, March 1996, Vol. 86: 441-442>
- [21] American Nurses Association, June 2003 Resolution: "The ANA will... Support legislation to remove criminal penalties  
including arrest and imprisonment for bona fide patients and prescribers of therapeutic marijuana/cannabis."  
< >
- [22] AIDS Action Council, "Resolution in Support of Access to Medical-Use Marijuana," adopted by the Public Policy Committee of  
AIDS Action Council: November 15, 1996. The resolution states, in part, that the Council "supports the elimination of federal  
restrictions that bar doctors from prescribing marijuana for medical use by individuals with HIV/AIDS."
- [23] Charuvastra et al. 2005. Physician Attitudes Regarding the Prescription of Medical Marijuana. Journal of Addictive Diseases 24:  
87-93. < >
- [24] CNN/Time telephone poll conducted October 23-24, 2002 by Harris Interactive.
- [25] <  
Widespread\_Support\_for\_Medical\_Marijuana\_Throughout\_the\_Country.htm>
- [26] House of Lords Press Office. "Lords Say, Legalise Cannabis for Medical Use." November 11, 1998. London.  
< >
- [27] National Academy of Sciences, Institute of Medicine. 1999. Marijuana and Medicine: Assessing the Science Base. Washington  
DC: National Academy Press. page 3. < >
- [28] Ibid. page 8.
- [29] Ibid. page 203
- [30] A. Holdcroft. 2001. Cannabinoids: from plant to patient. Investigative Drugs Journal. 4: 773-775. (See specifically: Abstract:  
"The active constituents of cannabis, predominantly cannabinoids and possibly flavonoids, are more effective than a single  
cannabinoid. ... Government ... clinical trials of cannabis ... should enable evidence to be presented to regulatory bodies documenting  
the medicinal uses of standardized cannabis plant material.")
- [21] Canadian Special Senate Committee on Illegal Drugs. 2002. Cannabis: Our Position for a Canadian Public Policy. Ottawa.  
Proposals for Implementing the Regulation of Cannabis for Therapeutic and Recreational Purposes, page 51.  
< >
- [32] Canada News Wire. "Sativex: Novel cannabis derived treatment for MS pain now available in Canada by prescription." June 20,  
2005. < >
- [33] General Accounting Office. 2002. Marijuana: Early Experiences With Four States' Laws That Allow Use For Medical Purposes.  
Washington, DC, page 4. <http:// >
- [34] National Academy of Sciences, Institute of Medicine. 1999. Marijuana and Medicine: Assessing the Science Base. Washington  
DC: National Academy Press. page 104. < >
- [35] Editorial: "Federal Foolishness and Marijuana." January 30, 1997. New England Journal of Medicine 336: 366-367.  
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Contact Information

Paul Armentano  
Senior Policy Analyst  
NORML | NORML Foundation  
1600 K St., NW | Suite 501  
Washington, DC 20006-2832  
202 / 483-5500 | paul@norml.org