

IOWA BOARD OF PHARMACY

PETITION FOR RECOMMENDATION)	PETITION FOR
TO REMOVE MARIJUANA FROM)	AGENCY ACTION
SCHEDULE I OF THE IOWA UNIFORM)	
CONTROLLED SUBSTANCES ACT)	

To: Iowa Board of Pharmacy
400 SW Eighth Street, Suite E
Des Moines, Iowa 50309-4688

By provision of law:

Annually, within thirty days after the convening of each regular session of the general assembly, the Board shall recommend to the general assembly any deletions from, or revisions in the schedules of substances, enumerated in sections 124.204, 124.206, 124.208, 124.210, or 124.212, which it deems necessary or advisable.

Iowa Code § 124.201(1) (2009).

1. The board shall recommend to the general assembly that the general assembly place a substance in schedule I if the substance is not already included therein and the board finds that the substance:
 - a. Has high potential for abuse; and
 - b. Has no accepted medical use in treatment in the United States; or lacks accepted safety for use in treatment under medical supervision.
2. If the board finds that any substance included in schedule I does not meet these criteria, the board shall recommend that the general assembly place the substance in a different schedule or remove the substance from the list of controlled substances, as appropriate.

Iowa Code § 124.203 (2009).

RECEIVED

AUG 03 2012

REQUESTED ACTION

This petition requests a recommendation from the Iowa Board of Pharmacy (“Board” hereafter) to the Eighty-Fifth Iowa General Assembly that marijuana be removed from Schedule I, Iowa Code § 124.204, and such other revisions in the schedules which the Board deems necessary or advisable.

PRIOR HISTORY

A. First Ruling from the Board

On May 12, 2008, the Board was asked to make a recommendation to the general assembly that marijuana be removed from Schedule I. The reason given for that request was that twelve (12) state laws accepting the medical use of marijuana enacted between 1996 and 2008 established marijuana’s “accepted medical use in treatment in the United States” as a matter of law.¹ The question of whether marijuana has “accepted medical use in treatment in the United States” was presented as a question of law

¹ Alaska, 1998; California, 1996; Colorado, 2000; Hawaii, 2000; Maine, 1999; Montana, 2004; Nevada, 2000; New Mexico, 2007; Oregon, 1998; Rhode Island, 2006; Vermont, 2004; Washington, 1998. Alaska Statutes § 17.37; California Health & Safety Code § 11362.5; Colorado Constitution Article XVIII, Section 14; Hawaii Revised Statutes § 329-121; 22 Maine Revised Statutes § 2383-B; Montana Code Annotated § 50-46-101; Nevada Constitution Article 4 § 38 - Nevada Revised Statutes Annotated § 453A.010; New Mexico Statutes Annotated § 30-31C-1; Oregon Revised Statutes § 475.300; Rhode Island General Laws § 21-28.6-1; 18 Vermont Statutes Annotated § 4471; Revised Code Washington (ARCW) § 69.51A.005.

rather than a question of science. See Iowa Board of Pharmacy Case No. 2008-105.

On October 7, 2008, the Board denied the request because it did not include any scientific evidence on marijuana's "potential for abuse."²

On April 21, 2009, the Iowa District Court remanded the case to the Board because "potential for abuse" is not determinative of whether marijuana should be placed in Schedule I. *McMahon v. Iowa Board of Pharmacy*, No. CV 7415 (Polk County), Ruling on Petition for Judicial Review.³

B. Second Ruling from the Board

On July 21, 2009, the Board again denied the request because it did not include any scientific evidence on the question of marijuana's medical efficacy.⁴

Judicial review was then sought on the grounds that the Board misinterpreted the statutory language "accepted medical use in treatment in

² http://petition.iowamedicalmarijuana.org/2012/20081007_pharmacy_board.pdf

³ http://petition.iowamedicalmarijuana.org/2012/20090421_district_court.pdf ("Section 124.203 of the Iowa Code requires that any controlled substance have (1) a high potential for abuse, **and** (2) no accepted medical use in treatment in the United States before it may be classified under Schedule I. Because the Code imposes both criteria as a prerequisite to Schedule I classification, the failure to meet either would require recommendation to the legislature for removal or rescheduling. See *id.* As such, the Board's statement that it 'would also need to make a finding that marijuana lacks a high potential for abuse' before it could recommend to the legislature that marijuana be moved from Schedule to Schedule II is based upon an erroneous interpretation of law.")

⁴ http://petition.iowamedicalmarijuana.org/2012/20090721_pharmacy_board.pdf

the United States” to mean “medical efficacy” rather than accepted medical use in 12 states (all of which are “in the United States”).⁵

C. Third Ruling from the Board

While the appeal was pending, on July 21, 2009, the Board, sua sponte (on its own accord), decided to hold evidentiary hearings on medical marijuana and take evidence addressing, inter alia, the 8 factors in Iowa Code § 124.201(1)(a)-(h).⁶

The Board held a series of four public hearings, from August 19, 2009, to November 4, 2009, in Des Moines, Mason City, Iowa City, and Council Bluffs. The public hearings were transcribed by a certified court reporter.⁷

After the public hearings concluded on November 4, 2009, the Board voted unanimously on February 17, 2010, to recommend that the general assembly remove marijuana from Schedule I.⁸

On May 14, 2010, the Iowa Supreme Court dismissed the appeal as moot. *McMahon v. Iowa Board of Pharmacy*, No. 09-1789, Order.⁹

⁵ http://petition.iowamedicalmarijuana.org/2012/20091030_district_court.pdf

⁶ http://petition.iowamedicalmarijuana.org/2012/20090721_scheduling_review.pdf; http://www.iowamedical.org/documents/news/081809_MarijuanaHearings.pdf; the 8 factors in Iowa Code § 124.201(1)(a)-(h) do not address the legal question of whether marijuana has accepted medical use in treatment in the United States as a matter of law based on individual state statutes accepting the medical use of marijuana.

⁷ <http://www.iowamedicalmarijuana.org/pharmacyhearings.aspx>

⁸ http://petition.iowamedicalmarijuana.org/2012/20100217_pharmacy_board.pdf

D. The Board is not required to explain its decision

Subsequent litigation held that the Iowa Board of Pharmacy is not required by law to explain the rationale for its decision. *Olsen v. Iowa Board of Pharmacy*, No. CV 8156 (Polk County), Ruling on Respondent's Motion to Dismiss (Aug. 23, 2010).¹⁰

E. Subsequent action by the Board

In November of 2010, the Board pre-filed LSB 1274DP with the Iowa Legislature (SSB 1016), recommending, inter alia, that the general assembly remove marijuana, Iowa Code § 124.204(4)(m), from Schedule I.¹¹

F. Inaction by the legislature

During the 2011-2012 legislative sessions the general assembly neither accepted nor rejected the Board's recommendation.

⁹ http://petition.iowamedicalmarijuana.org/2012/20100514_supreme_court.pdf ("The Board ultimately made the reclassification recommendation sought by the petitioners and the intervenor.")

¹⁰ http://petition.iowamedicalmarijuana.org/2012/20100823_district_court.pdf ("The Board did not supply any formal findings of fact or law in their recommendation to the state legislature.")

¹¹ http://petition.iowamedicalmarijuana.org/2012/ssb1016_Introduced.pdf
(http://www.iowa.gov/ibpe/pdf/2010_11_24minutes.pdf)

WHY THIS ACTION IS NECESSARY

Because the general assembly neither accepted nor rejected the Board's recommendation, the administrative record supporting the Board's recommendation in 2010 is no longer current. This petition seeks a current recommendation from the Board to the Eighty-Fifth Iowa General Assembly (2013-2014) that the general assembly remove marijuana from Schedule I. When the general assembly eventually does address this matter, it should be advised of the most recent legal and scientific information available.

ADDITIONAL EVIDENCE

In support of this petition and in addition to the evidence presented to the Board between August 19, 2009, and November 4, 2009, the following evidence is presented in support of this petition.

A. Additional states have accepted the medical use of marijuana in treatment since May 12, 2008¹²

In addition to the original list of 12 states that had accepted the medical use of marijuana in treatment of medical conditions as of May 12, 2008, when the first petition was filed with the Board, five additional states and the District of Columbia have now accepted the medical use of marijuana in treatment: Arizona, November 2, 2010; Connecticut, May 31,

¹² The first petition was filed with the Board on May 12, 2008.

2012; Delaware, May 13, 2011; District of Columbia, May 21, 2010;

Michigan, November 4, 2008; New Jersey, January 18, 2010.¹³

B. Two states have removed marijuana from Schedule I since November 4, 2009¹⁴

On June 16, 2010, the state of Oregon removed marijuana from Schedule I of the Oregon list of controlled substances (<http://www.pharmacy.state.or.us/pharmacy/Imports/News/June.29.10PressReleaseMarijuana.pdf>). The evidence supporting Oregon's decision to remove marijuana from Schedule I can be found on the official website of the Oregon Board of Pharmacy (<http://www.pharmacy.state.or.us/Pharmacy/Marijuana-Rescheduling.shtml>).

On May 31, 2012, the state of Connecticut enacted Public Act No. 12-55, Section 18(e), directing the Connecticut Commissioner of Consumer Protection to remove marijuana from Schedule I by January 1, 2013 (<http://www.cga.ct.gov/2012/ACT/PA/2012PA-00055-R00HB-05389-PA.htm>).

¹³ Arizona Revised Statutes, Title 36, Chapter 28.1, §§ 36-2801 through 36-2819; Connecticut Public Act No. 12-55 (May 31, 2012) (not yet codified); Delaware Code, Title 16, Chapter 49A, §§ 4901A through 4926A; D.C. Law 18-210; D.C. Official Code, Title 7, Chapter 16B, §§ 7-1671.01 through 7-1671.13; Michigan Compiled Laws, Chapter 333, §§ 333.26421 through 333.26430; New Jersey Public Laws 2009, Chapter 307, New Jersey Statutes, Chapter 24:6I, §§ 24:6I-1 through 24:6I-16.

¹⁴ The Iowa Board of Pharmacy closed the previous administrative record on November 4, 2009, and made its final ruling on February 17, 2010.

C. Two states have petitioned for federal removal of marijuana from Schedule I since November 4, 2009¹⁵

On November 30, 2011, the states of Washington and Rhode Island petitioned the U.S. Drug Enforcement Administration (“DEA” hereafter) to remove marijuana from Schedule I

([http://www.governor.wa.gov/news/news-](http://www.governor.wa.gov/news/news-view.asp?pressRelease=1809&newsType=1)

[view.asp?pressRelease=1809&newsType=1](http://www.governor.wa.gov/news/news-view.asp?pressRelease=1809&newsType=1)). The evidence supporting

Washington’s and Rhode Island’s petition to the DEA is published on the official website of the Governor of the state of Washington

(http://www.governor.wa.gov/priorities/healthcare/petition/combined_document.pdf).

D. One state department of health has certified an additional condition for which marijuana has medical use in treatment since November 4, 2009¹⁶

On August 26, 2010, the Washington Department of Health added Renal Failure to its list of medical conditions for which marijuana can be used in treatment.

E. Two states have added additional conditions for which marijuana can be used in treatment since approximately November 4, 2009¹⁷

¹⁵ See footnote 14.

¹⁶ See footnote 14.

¹⁷ See footnote 13.

On November 3, 2009, the state of Maine added the following medical conditions for which marijuana can be used in treatment: cancer, glaucoma, HIV, acquired immune deficiency syndrome, hepatitis C, amyotrophic lateral sclerosis, Crohn's disease, Alzheimer's, nail-patella syndrome, chronic intractable pain, cachexia or wasting syndrome, severe nausea, seizures (epilepsy), severe and persistent muscle spasms, and multiple sclerosis.

On July 1, 2011, the state of Montana increased the scope of medical conditions for which marijuana can be used in treatment: painful peripheral neuropathy; a central nervous system disorder resulting in chronic, painful spasticity or muscle spasms; admittance into hospice care.

F. Professional Organizations have recommended the reclassification of marijuana since November 4, 2009¹⁸

On November 10, 2009, the American Medical Association recommended reclassification of marijuana (<http://www.ama-assn.org/resources/doc/csaph/i09csaph3ft.pdf>).

On December 3, 2009, the Iowa Board of Pharmacy presented its findings to the National Association of Boards of Pharmacy (<http://www.nabp.net/events/assets/Jessen.pdf>) (<http://www.nabp.net/events/past-educational-sessions/symposium/>).

¹⁸ See footnote 13.

On April 16, 2010, the Iowa Medical Society adopted a resolution supporting reclassification of marijuana (<http://www.iowamedical.org/documents/Legis/IMSPolicyCompendium2011.pdf>, see page 16).

On May 25, 2010, the National Association of Boards of Pharmacy gave the Iowa Board of Pharmacy an award for its work on reclassification of marijuana (<http://www.nabp.net/publications/assets/IA082011.pdf>).

Although the Iowa Pharmacy Association (IPA) does not publish its medical marijuana policy on its website (<http://www.iarx.org/>), on May 15, 2011, IPA's Chair, Dr. Renae Chesnut, shared this policy adopted by the IPA in 2010:

2010 Policy
MARIJUANA FOR MEDICAL PURPOSES

IPA supports legislation that mandates an active role for pharmacists and the Iowa Board of Pharmacy to define rules and regulations for monitoring, distributing, and regulating marijuana for medical purposes.

IPA supports the development of a restricted process for production, procurement, distribution, and control of a standardized marijuana product for medical purposes.

IPA supports education of pharmacists, pharmacy technicians, and student pharmacists on marijuana for medical purposes.

IPA supports biomedical research to investigate the potential medical uses, dosing, safety, and efficacy of marijuana.

G. Medical research continues to support the medical use of marijuana

Submitted with this petition is a CD containing additional materials which have either been published after November 4, 2009 when the previous administrative record was closed, or which have not been previously submitted to the Board during the time the previous administrative record was open from August 19, 2009, to November 4, 2009. These materials are indexed and attached as an ADDENDUM to this petition.

To briefly summarize, California's Center for Medicinal Cannabis Research (<http://www.cmcrc.ucsd.edu/>) was established by the California Legislature to answer the question, "Does marijuana have therapeutic value?" The Center for Medicinal Cannabis Research concluded:

The classification of marijuana as a Schedule I drug as well as the continuing controversy as to whether or not cannabis is of medical value are obstacles to medical progress in this area. Based on evidence currently available the Schedule I classification is not tenable; it is not accurate that cannabis has no medical value, or that information on safety is lacking.

Grant I, Atkinson JH, Gouaux B, Wilsey B. Medical marijuana: clearing away the smoke. *The Open Neurology Journal*. 2012; Vol. 6, pp. 18-25, at page 24.

LEGAL ARGUMENT

A. Background

Nothing in Schedule I of Iowa's Uniform Controlled Substances Act except marijuana has ever been accepted for medical use in any state "in the United States" since the Iowa Uniform Controlled Substances Act was enacted approximately 41 years ago.¹⁹

Unlike anything else in Schedule I, marijuana has a long history of medical use in the United States. Marla James v. City of Costa Mesa, No. 10-55769 (9th Circuit, May 21, 2012) (Berzon, J., dissenting)²⁰, Slip. Op. at pages 5309-5310:

First, while California in 1996 became the first of the sixteen states that currently legalize medical marijuana, the history of medical marijuana goes back much further, so that use for medical purposes was not unthinkable in 1990. At one time, "almost all States . . . had exceptions making lawful, under specified conditions, possession of marihuana by . . . persons for whom the drug had been prescribed or to whom it had been given by an authorized medical person." *Leary v. United States*, 395 U.S. 6, 17 (1969). What's more, the Federal government itself conducted an experimental medical marijuana program from 1978 to 1992, and it continues to provide marijuana to the surviving participants. See *Conant v. Walters*, 309 F.3d 629, 648 (9th Cir. 2002). The existence of these programs indicates

¹⁹ Iowa adopted the Uniform Controlled Substances Act, 9 U.L.A. Part II, in 1971 and the federal Controlled Substances Act was enacted by Congress in 1970. 1971 Iowa Acts 305, Chapter 148 (S.F. 1), enacted March 5, 1971, effective July 1, 1971; Public Law 91-513, 84 Stat. 1236, enacted October 27, 1970, codified at 21 U.S.C. §§ 801-904.

²⁰ <http://www.ca9.uscourts.gov/datastore/opinions/2012/05/21/10-55769.pdf>

that medical marijuana was not a concept utterly foreign to Congress before 1996.

Marijuana's placement in Schedule I was controversial and has continued to remain controversial, unlike anything else in Schedule I. A presidential commission was established in the federal Controlled Substances Act (CSA) to address this controversy.²¹ NORML v. Bell, 488 F.Supp. 123, 135 (D.D.C. 1980):

In an effort to secure more information about marijuana, Congress, in section 601 of DAPCA, established the Commission on Marihuana and Drug Abuse to study marijuana use and its effects. The Commission, headed by Governor Raymond P. Shafer, issued its report, *Marihuana: A Signal of Misunderstanding*, in 1972. The Commission recommended that federal and state penalties for private possession of marijuana be eliminated and that governmental efforts should focus on discouraging marijuana use. *Signal of Misunderstanding* 134-38, 151-60.

The controversy hasn't gone away. NORML v. DEA, 559 F.2d 735, 751 n.70 (D.C. Cir. 1977):

New studies have indicated that the dangers of marihuana use are not as great as once believed. A recent report of a federal panel representing, inter alia, HEW, DEA, the State Department, and the White House, concluded that marihuana use entails a "relatively low social cost," and suggested that decriminalization be considered. *Washington Post*, Dec. 12, 1976, at A1, col. 1; *Washington Star*, Dec. 12, 1976, at A7, col. 1. See *United States v. Randall*, supra note 61, at 2254 (characterizing marihuana as "a drug with no demonstrably

²¹Public Law 91-513, Oct. 27, 1970, 84 Stat. 1280-1281, Part F — Advisory Commission, Establishment of Commission on Marihuana and Drug Abuse.

harmful effects”). Indeed, in NATIONAL COMMISSION ON MARIHUANA AND DRUG ABUSE, SECOND REPORT, DRUG USE IN AMERICA: PROBLEM IN PERSPECTIVE, Vol. I, at 235 (1973), the Commission recommended that “the United States take the necessary steps to remove cannabis from the Single Convention on Narcotic Drugs (1961), since this drug does not pose the same social and public health problems associated with the opiates and coca leaf products.”

See also the OPINION AND RECOMMENDED RULING, FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION OF Administrative LAW JUDGE (Francis L. Young), DEA Docket No. 86-22, September 6, 1988, at pages 58-59 (“Marijuana, in its natural form, is one of the safest therapeutically active substances known to man”).²²

Although the DEA Administrator rejected Judge Young’s recommendation because the Administrator found that marijuana had no accepted medical use in treatment in the United States, the issue of safety for use in treatment under medical supervision is no longer considered a separate analytical question. See Alliance for Cannabis Therapeutics v. DEA, 930 F.2d 936, 940 n.4 (D.C. Cir. 1991):

Since the Administrator based this determination on his decision that no medical uses are possible (and thus any use lacks “accepted safety”), we do not see that “safety” issue as raising a separate analytical question.

²² <http://www.iowamedicalmarijuana.org/pdfs/young.pdf>

The following year, DEA formally announced that previous administrative decisions separating safety from accepted medical use were incorrect and both issues are the same for analytical purposes. Marijuana Scheduling Petition; Denial of Petition; Remand, DEA Docket No. 86-22, Vol. 57, Federal Register, No. 59, at page 10504 (Thursday, March 26, 1992):

The scheduling criteria of the Controlled Substances Act appear to treat the lack of medical use and lack of safety as separate considerations. Prior rulings of this Agency purported to treat safety as a distinct factor. 53 FR 5156 (February 22, 1988). In retrospect, this is inconsistent with scientific reality. Safety cannot be treated as a separate analytical question.

Regardless of marijuana's safety for use in treatment under medical supervision in 1988, lack of accepted medical use in treatment in the United States at that time (and in 1991 and 1994 when the appeals had finally been exhausted) was fatal to the question of whether marijuana could be removed from Schedule I at that time.

After an initial remand, DEA's refusal to reclassify marijuana was upheld in Alliance for Cannabis Therapeutics v. DEA, 15 F.3d 1131 (D.C. Cir. 1994). It's no coincidence that just two years later, in 1996, California became the first state "in the United States" to accept the medical use of marijuana in treatment "in the United States."

B. History

On May 14, 2010, the Iowa Supreme Court held that the question of whether the Board should have recognized that marijuana has accepted medical use in treatment in the United States as a matter of law was moot because the Board made the recommendation that was sought in the petition. Because the Board did not explain the rationale for its recommendation, it is not possible to determine whether the Board recognized marijuana had accepted medical use in treatment in the United States as a matter of law based on 12 states that had accepted the medical use of marijuana between 1996 and 2008 when the first petition was filed.²³

C. Argument

Marijuana has accepted medical use in treatment in the United States as a matter of law because 17 states now accept the medical use of marijuana, as well as the District of Columbia. The Iowa legislature used specific words in setting the condition for marijuana's placement in Schedule I. Marijuana must not have any "accepted medical use in treatment in the United States" to remain in Schedule I.

The Iowa legislature defined the term "state" in the Iowa Uniform Controlled Substances Act:

"*State*," when applied to a part of the United States, includes any state, district, commonwealth, territory, insular possession,

²³ See footnote 9.

and any area subject to the legal authority of the United States of America.

Iowa Code § 124.101(29).

Accepted medical use in treatment “in the United States” does not mean accepted medical use “in every state.” In the Board’s Supplemental Order of July 21, 2009, Case No. 2008-105, at page 9, the Board said “the United States is 50 states, not 12.” The United States Court of Appeals for the First Circuit addressed this argument in Grinspoon v. DEA, 828 F.2d 881, 886 (1st Cir. 1987):

We add, moreover, that the Administrator’s clever argument conveniently omits any reference to the fact that the pertinent phrase in section 812(b)(1)(B) reads “in the United States,” (emphasis supplied). We find this language to be further evidence that the Congress did not intend “accepted medical use in treatment in the United States” to require a finding of recognized medical use in every state or, as the Administrator contends, approval for interstate marketing of the substance.

Accepted medical use in treatment “in the United States” does not mean accepted medical use “in Iowa.” If the Iowa legislature had intended to make the condition for placement in Schedule I to be accepted medical use “in Iowa,” it would have said so. The Board cannot simply assume the legislature made a mistake in using the phrase “in the United States” and really meant to say “in Iowa.” Nor can the Board simply assume the legislature meant “medical use” as if the words “in the United States” were

not there. The legislature could have easily said “medical efficacy” if that was the legislature’s intent. The intent of the Iowa legislature is expressed in Iowa Code § 124.601 (“to make uniform the law of those states which enact it”).

The Iowa legislature’s choice of the words “in the United States” is consistent with the understanding that states are the primary regulators of medical practice in the United States. Conant v. Walters, 309 F.3d 629, 639 (9th Cir. 2002):

Our decision is consistent with principles of federalism that have left states as the primary regulators of professional conduct. See *Whalen v. Roe*, 429 U.S. 589, 603 n. 30, 51 L. Ed. 2d 64, 97 S. Ct. 869 (1977) (recognizing states' broad police powers to regulate the administration of drugs by health professionals); *Linder v. United States*, 268 U.S. 5, 18, 69 L. Ed. 819, 45 S. Ct. 446 (1925) ("direct control of medical practice in the states is beyond the power of the federal government"). We must "show[] respect for the sovereign States that comprise our Federal Union. That respect imposes a duty on federal courts, whenever possible, to avoid or minimize conflict between federal and state law, particularly in situations in which the citizens of a State have chosen to serve as a laboratory in the trial of novel social and economic experiments without risk to the rest of the country." *Oakland Cannabis*, 532 U.S. at 501 (Stevens, J., concurring) (internal quotation marks omitted).

And see Gonzales v. Oregon, 546 U.S. 243, 251 (2006) (“The CSA explicitly contemplates a role for the States”).

In Gonzales v. Raich, 545 U.S. 1, 28 n.37 (2005), the U.S. Supreme Court acknowledged that the validity of marijuana's current federal classification is doubtful:

We acknowledge that evidence proffered by respondents in this case regarding the effective medical uses for marijuana, if found credible after trial, would cast serious doubt on the accuracy of the findings that require marijuana to be listed in Schedule I. See, e.g., Institute of Medicine, *Marijuana and Medicine: Assessing the Science Base* 179 (J. Joy, S. Watson, & J. Benson eds. 1999) (recognizing that “[s]cientific data indicate the potential therapeutic value of cannabinoid drugs, primarily THC [Tetrahydrocannabinol] for pain relief, control of nausea and vomiting, and appetite stimulation”); see also *Conant v. Walters*, 309 F.3d 629, 640-643 (CA9 2002) (Kozinski, J., concurring) (chronicling medical studies recognizing valid medical uses for marijuana and its derivatives).

In Gonzales v. Oregon, 546 U.S. 243 (2006), the U.S. Supreme Court explained in detail what the Controlled Substances Act (CSA) is designed to prevent and what it leaves to the states' police powers.

. . . the CSA . . . regulates medical practice insofar as it bars doctors from using their prescription-writing powers as a means to engage in illicit drug dealing and trafficking as conventionally understood. Beyond this, however, the statute manifests no intent to regulate the practice of medicine generally. The silence is understandable given the structure and limitations of federalism, which allow the States “great latitude under their police powers to legislate as to the protection of the lives, limbs, health, comfort, and quiet of all persons.” (citations omitted)

Id., 546 U.S., at 269-270. “. . . when Congress wants to regulate medical practice in the given scheme, it does so by explicit language in the statute.”

Id., 546 U.S., at 272.

Finally, the phrase “accepted medical use in treatment in the United States” does not mean accepted medical use by the U.S. Food and Drug Administration (FDA) and/or the U.S. Drug Enforcement Administration (DEA). See Grinspoon v. DEA, 828 F.2d 881, 887 (1st Cir. 1987):

Unlike the CSA scheduling restrictions, the FDCA interstate marketing provisions do not apply to drugs manufactured and marketed wholly intrastate. Compare 21 U.S.C. § 801(5) with 21 U.S.C. § 321 (b), 331, 355(a). Thus, it is possible that a substance may have both an accepted medical use and safety for use under medical supervision, even though no one has deemed it necessary to seek approval for interstate marketing.

CONCLUSION

This petition acknowledges the Board has a duty to consider the 8 factors in Iowa Code section 124.201(1)(a)-(h). However, none of those factors is determinative, either singly or cumulatively. The Board cannot interpret the 8 factors in Iowa Code section 124.201(1)(a)-(h) a manner which would result in a recommendation inconsistent with Iowa Code §

124.203(1)(b).²⁴ The law requires that marijuana be removed from Schedule I because marijuana now has accepted medical use in treatment in the United States as a matter of law.

Dated August 3, 2012.

Respectfully submitted,

Carl Olsen, Executive Director
Iowans for Medical Marijuana
130 E. Aurora Ave.
Des Moines, IA 50313-3654
515-288-5798 home phone
515-343-9933 cell phone
carl-olsen@mchsi.com

ADDENDUM

A PDF file of this petition is included on the CD.

National Cancer Institute at the National Institutes of Health

Cannabis and Cannabinoids (PDQ®)

<http://www.cancer.gov/cancertopics/pdq/cam/cannabis/healthprofessional>

CENTER FOR MEDICINAL CANNABIS RESEARCH

Report to the Legislature and Governor of the State of California

²⁴ In his ruling remanding the case to the Board, Judge Novak stated, "A finding of accepted medical use in treatment in the United States alone would be sufficient to warrant recommendation for reclassification or removal pursuant to the terms of Iowa Code section 124.203." *McMahon v. Board of Pharmacy*, No. CV 7415, April 21, 2009, page 4, footnote 1.

presenting findings pursuant to SB847 which created the CMCR and provided state funding. February 11, 2010.

http://www.cmcrc.ucsd.edu/images/pdfs/CMCR_REPORT_FEB17.pdf

Armentano P. (2012). *Clinical Applications for Cannabis and Cannabinoids: A Review of the Recent Scientific Literature* (5th Ed.) NORML.

http://norml.org/pdf_files/NORML_Clinical_Applications_for_Cannabis_and_Cannabinoids.pdf

Marijuana Policy Project (2011). *State-by-State Medical Marijuana Laws*.

<http://www.mpp.org/assets/pdfs/library/State-by-State-Laws-Report-2011.pdf>

Mathre ML. (2012). *Cannabis/Cannabinoid Research Update (late 2009 - July 2012)*. Patients Out of Time.

Materials On the CD submitted with this petition:

MedicalCannabis.com Patients Out of Time

To: Iowa Board of Pharmacy

Re: Cannabis/Cannabinoid Research Update (late 2009 - July 2012)

Overviews/reviews

Armentano P. (2012). *Clinical Applications for Cannabis and Cannabinoids: A Review of the Recent Scientific Literature* (5th Ed.) NORML.

[NORML_Clinical_Applications_for_Cannabis_and_Cannabinoids.pdf](http://norml.org/pdf_files/NORML_Clinical_Applications_for_Cannabis_and_Cannabinoids.pdf)

Alexander S, Mackie K & Ross R. (Eds.) (2010). Special Issue: Themed Issue: Cannabinoids. *British Journal of Pharmacology*. 160(5):421-783.

On the CD: [index.html#bjp2010](#)

Bab I & Alexander, S. (Eds). (2011). Special Issue: Cannabinoids in Biology and Medicine, Part 1. *British Journal of Pharmacology*. 163(7):1327-1562.

On the CD: [index.html#bjp2011](#)

Grant I, Atkinson JH, Gouaux B & Wilsey B. (2012). Medical marijuana: clearing away the smoke. *Open Neurol J.* 6:18-25. DOI: 10.2174/1874205X01206010018

On the CD: Grant_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22629287>

Izzo AA, Borrelli F, Capasso R, Di Marzo V & Mechoulam R. (2009). Non-psychoactive plant cannabinoids: new therapeutic opportunities from an ancient herb. *Trends in Pharmacological Sciences.* 30(10):515-27.

On the CD: Izzo_2009.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19729208>

Russo E. (2011). Taming THC: potential cannabis synergy and phytocannabinoid-terpenoid entourage effects. *British Journal of Pharmacology.* DOI: 10.1111/j.1476-5381.2011.01238.x

On the CD: Russo_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21749363>

Clinical Trials

Abrams, DI, Couey P, Shade SB, Kelly ME, Benowitz NL. (2011). Cannabinoid-opioid interaction in chronic pain. *Clinical Pharmacology & Therapeutics.* 90(6):844-851.

On the CD: Abrams_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22048225>

Corey-Bloom J, Wolfson T, Gamst A, Jin S, Marcotte TD, Bentley H & Gouaux B. (2012). Smoked cannabis for spasticity in multiple sclerosis: a randomized, placebo-controlled trial. *CMAJ.* 184(10). DOI: 10.1503/cmaj.110837

On the CD: Corey-Bloom_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22586334>

Duran M, Pérez E, Abanades S, Vidal X, Saura C, Majem M, Arriola E, Rabanal M, Pastor A, Farré M, Rams N, Laporte JR, Capellà D. Preliminary efficacy and safety of an oromucosal standardized cannabis extract in chemotherapy-induced nausea and vomiting. *Br J Clin Pharmacol.* 2010 Nov;70(5):656-63. doi: 10.1111/j.1365-2125.2010.03743.x.

On the CD: Duran_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21039759>

Riggs PK, Vaida F, Rossi SS, Sorkin LS, Gouaux B, Grant I & Ellis RJ. (2012). A pilot study of the effects of cannabis on appetite hormones in HIV-infected adult men. *Brain Res.* 1431:46-52.

On the CD: Riggs_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22133305>

Ware MA, Wang T, Shapiro S, Robinson A, Ducruet T, Huynh T, Gamsa A, Bennett GJ, & Collet JP. (2010). Smoked cannabis for chronic neuropathic pain: a randomized controlled trial. *CMAJ* 182(14). DOI: 10.1503/cmaj.091414.

On the CD: Ware_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20805210>

The Endocannabinoid System

Amorós I, Barana A, Caballero R, Gómez R, Osuna L, Lillo, MP, Tamargo J & Delpón E. (2010). Endocannabinoids and cannabinoid analogues block human cardiac Kv4.3 channels in a receptor-dependent manner. *Journal of Molecular and Cellular Cardiology.* 48(1):201-10.

On the CD: Amoros_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19616555>

Bíró T, Tóth BI, Haskó, Paus R & Pacher P. (2009). The endocannabinoid system of the skin in health and disease: novel perspectives and therapeutic opportunities. *Trends Pharmacol Sci.* 30(8):411-20.

On the CD: Biro_2009.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19608284>

Di Marzo V & Piscitelli F. (2011). Gut feelings about the endocannabinoid system. *Neurogastroenterol Motil.* 23(5):391-8.

On the CD: DiMarzo_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21481098>

Guindon J, & Hohmann A., Review: The endocannabinoid system and cancer: therapeutic implication. *British Journal of Pharmacology.* 2011; 163:1447-63.

On the CD: Guindon_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21410463>

Shohami E, Cohen-Yeshurun A, Maqid L, Alqali M & Mechoulam R. (2011). Endocannabinoids and traumatic brain injury. *Br. J Pharmacology*. 163(7):1402-10.

On the CD: Shohami_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21418185>

Cancer

Aviello G, Romano B, Borrelli F, Capasso R, Gallo L, Piscitelli F, DiMarzo V & Izzo AA. Chemopreventative effect of the non-psychotropic phytocannabinoid cannabidiol on experimental colon cancer. *Journal of Molecular Medicine (Berlin)*. 2012, Jan 10. Doi 10.1007/200109-011-0856-x.

On the CD: Aviello_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22231745>

Cafferall MM, Andradas C, Mira E, Pérez-Gómez E, Cerutti C, Moreno-Bueno G, Flores JM, Garcia-Real I, Palacios J, Manes S, Guzman M & Sánchez C. Cannabinoids reduce ErbB2-driven breast cancer progression through Akt inhibition. *Molecular Cancer*. 2010;9:196. Doi:10.1186/1467-4598-9-196

On the CD: Cafferall_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20649976>

De Petrocellis L, Ligresti A, Schiano Moriello A, Iappelli M, Verde R, Stott CG, Cristino L, Orlando P, Di Marzo V. Non-THC cannabinoids counteract prostate carcinoma growth in vitro and in vivo: pro-apoptotic effects and underlying mechanisms. *Br J Pharmacol*. 2012 May 18. doi: 10.1111/j.1476-5381.2012.02027.x. [Epub ahead of print]

On the CD: DePetrocellis_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22594963>

Foroughi M, Hendson G, Sargent MA & Steinbok P. (2011). Spontaneous regression of septum pellucidum/forniceal pilocytic astrocytomas - possible role of Cannabis inhalation. *Childs Nerv Syst*. 27:671-9. DOI 10.1007/s00381-011-1410-4

On the CD: Foroughi_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21336992>

Freimuth N, Ramer R & Hinz B (2010). Antitumorigenic effects of cannabinoids beyond apoptosis. *The Journal of Pharmacology and Experimental Therapeutics*. 332(2):336-344.

On the CD: Freimuth_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19889794>

Leelawat S, Leelawat K, Narong S & Matangkasombut O. (2010) The dual effects of delta(9)-tetrahydrocannabinol on cholangiocarcinoma cells: anti-invasion activity at low concentration and apoptosis induction at high concentration. *Cancer Investig*. 28(4):357-63.

On the CD: Leelawat_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19916793>

Liang C, McClean MD, Marsit C, Christensen B, Peters E, Nelson HH & Kelsey KT. (2009). A population-based case-control study of marijuana use and head and neck squamous cell carcinoma. *Cancer Prevention Research*. 2(8):759-768

On the CD: Liang_2009.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19638490>

Malfitano AM, Ciaglia E, Gangemi G, Gazzerri P, Laezza C & Bifulco M. (2011). Update on the endocannabinoid system as an anticancer target. *Expert Opin Ther Targets*. 15(3):297-308.

On the CD: Malfitano_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21244344>

Marcu JP, Christian RT, Lau D, Zielinski AJ, Horowitz MP, Lee J, Pakdel A, Allison J, Limbad C, Moore DH, Yount GL, Desprez PY & McAllister SD. (2010). Cannabidiol enhances the inhibitory effects of delta-9-tetrahydrocannabinol on human glioblastoma cell proliferation and survival. *Mol Cancer Ther*. 9(1):180-9.

On the CD: Marcu_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20053780>

Ramer R, Merkord J, Rohde H & Hinz B. (2010). Cannabidiol inhibits cancer cell invasion via upregulation of tissue inhibitor of matrix metalloproteinases-1. *Biochemical Pharmacology*. 79(7):955-66.

On the CD: Ramer_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19914218>

Torres S, Lorente M, Rodríguez-Fornés F, Hernández-Tiedra S, Salazar M, Garcia-Taboada E, Barcia J, Guzman M & Velasco G. A combined preclinical therapy of cannabinoids and Temozolomide against glioma. *Molecular Cancer Therapeutics*. 2011;10:90-103.

On the CD: Torres_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21220494>

Velasco G, Sanchez C & Guzman M. Towards the use of cannabinoids as antitumour agents. *Nature Reviews Cancer*. Online 4 May 2012; doi:10.1038/nrc3247.

On the CD: Velasco_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22555283>

Whyte DA, Al-Hammadi S, Balhaj G, Brown OM, Penefsky HS & Souid AK. Cannabinoids inhibit cellular respiration of human oral cancer cells. *Pharmacology*. 2010; 85(6):328-35.

On the CD: Whyte_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20516734>

Mental Health

Crippa JA, Derenusson GN, Ferrari TB, Wichert-Ana L, Duran F, Marti N-Santos RO, Simões MV, Bhattacharyya S, Fusar-Poli P, Atakan Z, Santos Filho A, Freitas-Ferrari MC, McGuire P, Zuardi AW, Busatto G & Hallak JE (2010) Neural basis of anxiolytic effects of cannabidiol (CBD) in generalized social anxiety disorder: a preliminary report. *Journal of Psychopharmacology*. 25(1):121-30.

On the CD: Crippa_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20829306>

Leweke FM, Piomelli D, Pahlisch F, Muhl D, Gerth CW, Hoyer C, Klosterkötter J, Hellmich M & Koethe D. (2012). Cannabidiol enhances anandamide signaling and alleviates psychotic symptoms of schizophrenia. *Translational Psychiatry*. 2, e94. DOI: 10.1038/tp.2012.15

On the CD: Leweke_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22832859>

Passie T, Emrich HM, Karst M, Brandt SD & Halpern JH. (2012). Mitigation of post-traumatic stress symptoms by Cannabis resin: A review of the clinical and neurobiological evidence. *Drug Testing and Analysis*. DOI 10.1002/dta.1377.

On the CD: Passie_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22736575>

Multiple Sclerosis

Novotna A, Mares J, Ratcliffe S, Novakova I, Vachova M, Zapletalova O, Gasperini C, Pozzilli C, Cefaro L, Comi G, Rossi P, Ambler Z, Stelmasiak Z, Erdmann A, Montalban X, Klimek a, Davies P & Sativex Study Group. (2011). A randomized, double-blind, placebo-controlled, parallel-group, enriched-design study of nabiximols* (Sativex®), as add-on therapy, in subjects with refractory spasticity caused by multiple sclerosis. *Eur J Neurol*. 18(9):1122-31.

On the CD: Novotna_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21362108>

Wade DT, Collin C, Stott C & Duncombe P. (2010). Meta-analysis of the efficacy and safety of Sativex (nabiximols), on spasticity in people with multiple sclerosis. *Mult. Scler*. 16(6):707-14.

On the CD: Wade_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20558502>

Zajicek JP, Hobart JC, Slade A, Barnes D, Mattison PG. Multiple Sclerosis and Extract of Cannabis: results of the MUSEC trial. *Journal of Neurology, Neurosurgery, and Psychiatry*. 2012 Jul 12. [Epub ahead of print].

On the CD: Zajicek_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22791906>

Pain

Aggarwal SK. (2012). Cannabinergic pain medicine: a concise clinical primer and survey of randomized controlled trial results. *The Clinical Journal of Pain*.

On the CD: Aggarwal_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22367503>

Carter GT, Flanagan AM, Earleywine M, Abrams DI, Aggarwal SK & Grinspoon L. (2011). Cannabis in palliative medicine: improving care and reducing opioid-related morbidity. *Am J Hosp Palliat Care*. 28(5):297-303.

On the CD: Carter_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21444324>

Collen M. (2012). Prescribing cannabis for harm reduction. *Harm Reduction Journal*. 9:1. DOI: 10.1186/1477-7517-9-1

On the CD: Collen_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22208773>

Johnson JR, Burnell-Nugent M, Lossignol D, Ganae-Motan ED, Potts R & Fallon MT. (2010). Multicenter, double-blind, randomized, placebo-controlled, parallel-group study of the efficacy, safety, and tolerability of THC:CBD extract and THC extract in patients with intractable cancer-related pain. *J Pain Symptom Manage*. 39(2):167-79.

On the CD: Johnson_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19896326>

Lucas P. (2012). Cannabis as an adjunct to or substitute for opiates in the treatment of chronic pain. *Journal of Psychoactive Drugs*. 44(2):125-133.

On the CD: Lucas_2012.pdf

PubMed: Not found.

Lynch ME & Campbell F. (2011). Cannabinoids for treatment of chronic non-cancer pain; a systematic review of randomized trials. *British Journal of Clinical Pharmacology*. 72(5):735-44.

On the CD: Lynch_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21426373>

Portenoy RK, Ganae-Motan ED, Allende S, Yanaqihara R, shaiova L, Weinstein S, McQuade R, Wright S & Fallon MT. (2012). Nabiximols for opioid-treated cancer patients with poorly controlled chronic pain: a randomized, placebo-controlled, graded-dose trial. *J Pain*. 13(5):438-9.

On the CD: Portenoy_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22483680>

Safety

Bergamaschi MM, Queiroz RHC, Crippa JA & Zuardi AW. Safety and side effects of cannabidiol, a Cannabis sativa constituent. *Current Drug Safety*. 2011; 6(4):237-49.

On the CD: Bergamaschi_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22129319>

Ganon-Elazar E & Akirav I. (2012). Cannabinoids prevent the development of behavioral and endocrine alterations in a rat model of intense stress. *Neuropsychopharmacology*. 37:456-66.

On the CD: Ganon-Elazar_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21918506>

Koola MM, McMahon RP, Wehring HJ, Liu F, Mackowick KM, Warren KR, Feldman S, Shim JC, Love RC, Kelly DL. Alcohol and cannabis use and mortality in people with schizophrenia and related psychotic disorders. *J Psychiatr Res*. 2012 Aug;46(8):987-93. Epub 2012 May 16.

On the CD: Koola_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22595870>

Morgan CJA, Freeman TP, Schafer GL & Curran HV. (2010). Cannabidiol attenuates the appetitive effects of Δ^9 -tetrahydrocannabinol in humans smoking their chosen cannabis. *Neuropsychopharmacology*. 35:1879-85.

On the CD: Morgan_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20428110>

Morgan CJA, Schafer G, Freeman TP & Curran V. (2010). Impact of cannabidiol on the acute memory and psychotomimetic effects of smoked cannabis: naturalistic study. *The British Journal of Psychiatry*. 197:285-290. doi: 10.1192/bjp.bp.110.077503

On the CD: Morgan_2010_2.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20884951>

Pletcher MJ, Vittinghoff E, Kalhan R, Richman J, Safford M, Sidney S, Lin F & Kertesz S. (2012). Association between marijuana exposure and pulmonary function over 20 years. *JAMA*. 307(2): 173-181.

On the CD: Pletcher_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22235088>

Purohit V, Rapaka R & Shurtleff D. (2010). Role of cannabinoids in the development of fatty liver (steatosis). *AAPS J.* 12(2):223-7.

On the CD: Purohit_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20204561>

Reiman A. (2009). Cannabis as a substitute for alcohol and other drugs. *Harm Reduction Journal.* 6:35. DOI: 10.1186/1477-7517-6-35.

On the CD: Reiman_2009.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19958538>

Riggs PK, Vaida F, Rossi SS, Sorkin LS, Gouaux B, Grant I & Ellis RJ. (2012). A pilot study of the effects of cannabis on appetite hormones in HIV-infected adult men. *Brain Res.* 1431:46-52.

On the CD: Riggs_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22133305>

Rubio M, Villain H, Docaque F, Roussel BD, Ramos JA, Vivien D, Fernandez-Ruiz J & Ali C. (2011). Pharmacological activation/inhibition of the cannabinoid system affects alcohol withdrawal-induced neuronal hypersensitivity to excitotoxic insults. *PLoS One.* 6(8):e23690.

On the CD: Rubio_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3158793/>

Schreiner, AM & Dunn, ME (2012). Residual effects of cannabis use on neurocognitive performance after prolonged abstinence: A meta-analysis. *Experimental and Clinical Psychopharmacology.* Advance online publication. DOI: 10.1037/a0029117

On the CD: Schreiner_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22731735>

Other

Bab I, Zimmer A & Melamed E. (2009). Cannabinoids and the skeleton: from marijuana to reversal of bone loss. *Ann Med.* 41(8):560-7.

On the CD: Bab_2009.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/19634029>

Carter GT, Abood ME, Aggarwal SK, Weiss MD. Cannabis and amyotrophic lateral sclerosis: hypothetical and practical applications, and a call for clinical trials. *Am J Hosp Palliat Care*. 2010 Aug;27(5):347-56. Epub 2010 May 3.

On the CD: Carter_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20439484>

Costantino CM, Gupta A, Yewdall AW, Dale BM, Devi LA & Chen BK. (2012). Cannabinoid receptor 2-mediated attenuation of CXCR4-tropic HIV infection in primary CD4+ T cells. *PLoS One*. 7(3):e33961.

On the CD: Costantino_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22448282>

Fiz J, Durán, Capella D, Carbonell J & Farré M. (2011) Cannabis use in patients with fibromyalgia: effect on symptoms relief an health-related quality of life. *PLoS One* 6(4): e18440. DOI: 10.1371/journal.pone.0018440

On the CD: Fiz_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21533029>

Izzo AA & Sharkey KA. (2010). Cannabinoids and the gut: new developments and emerging concepts. *Pharmacology & Therapeutics*. 126(1):21-38.

On the CD: Izzo_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20117132>

Lal S, Prasad N, Ryan M, Tangri S, Silverberg MS, Gordon A & Steinhart H. (2011). Cannabis use amongst patients with inflammatory bowel disease. *Eur J Gastroenterol Hepatol*. 23(10):891-6.

On the CD: Lal_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21795981>

Molina PE, Winsauer P, Zhang P, Walker E, Birke L, Amedee A, Stouwe CV, Troxclair D, McGoey R, Varner K, Byerley L & LaMotte L. (2011). Cannabinoid administration attenuates the progression of simian immunodeficiency virus. *AIDS Res Hum Retroviruses*. 27(6):585-92.

On the CD: Molina_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/20874519>

Naftali T, Lev LB, Yablecovitch D, Half E & Konikoff FM. (2011). Treatment of Crohn's disease with cannabis: an observational study. *Isr Med Assoc J* 13(8):455-8.

On the CD: Naftali_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21910367>

Rajesh M, Mukhopadhyay P, Batkai S, Patel V, Saito K, Matsumoto S, Kashiwaya Y, Horvath B, Mukhopadhyay B, Becker L, Hasko G, Liadet L, Wink DA, Veves A, Mechoulam R & Pacher P. (2010). Cannabidiol attenuates cardiac dysfunction, oxidative stress, fibrosis, and inflammatory and cell death signaling pathways in diabetic cardiomyopathy. *Journal Am Coll Cardiol.* 56(25):2115-25.

On the CD: Rajesh_2010.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21144973>

Sagredo O, Pazos MR, Satta V, Ramos JA, Pertwee RG & Fernandez-Ruiz J. (2011). Neuroprotective effects of phytocannabinoid-based medicines in experimental models of Huntington's disease. *J Neurosci Res.* 89(9):1509-18.

On the CD: Sagredo_2011.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/21674569>

Sagredo O, Pazos MR, Valdeolivas S & Fernandez-Ruiz J. (2012). Cannabinoids: novel medicines for the treatment of Huntington's disease. *Recent Pat CNS Drug Discov.* 7(1):41-8.

On the CD: Sagredo_2012.pdf

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/22280340>

Past History

October 7, 2008 - Iowa Board of Pharmacy

April 21, 2009 - Iowa District Court

July 21, 2009 - Iowa Board of Pharmacy

July 21, 2009 - Scheduling Review

October 30, 2009 - Iowa District Court

February 17, 2010 - Iowa Board of Pharmacy

May 14, 2010 - Iowa Supreme Court

August 23, 2010 - Iowa District Court

November 29, 2010 - Iowa Board of Pharmacy

British Journal of Pharmacology

British Journal of Pharmacology

Special Issue: Cannabinoids in Biology and Medicine, Part I.

Guest Editors: Itai Bab and Steve Alexander

August 2011

Volume 163, Issue 7

Pages 1327-1562

EDITORIAL

Themed issue on cannabinoids in biology and medicine (pages 1327-1328)

REVIEWS

Endocannabinoid tone versus constitutive activity of cannabinoid receptors (pages 1329-1343)

Taming THC: potential cannabis synergy and phytocannabinoid-terpenoid entourage effects (pages 1344-1364)

Prospects for cannabinoid therapies in basal ganglia disorders (pages 1365-1378)

Cannabinoid receptor signalling in neurodegenerative diseases: a potential role for membrane fluidity disturbance (pages 1379-1390)

The dual neuroprotective-neurotoxic profile of cannabinoid drugs (pages 1391-1401)

Endocannabinoids and traumatic brain injury (pages 1402-1410)

Regulation of nausea and vomiting by cannabinoids (pages 1411-1422)

The case for peripheral CB1 receptor blockade in the treatment of visceral obesity and its cardiometabolic complications (pages 1423-1431)

The endocannabinoid system as a key mediator during liver diseases: new insights and therapeutic openings (pages 1432-1440)

Skeletal lipidomics: regulation of bone metabolism by fatty acid amide family (pages 1441-1446)

The endocannabinoid system and cancer: therapeutic implication (pages 1447-1463)

RESEARCH PAPERS

Peripheral antinociceptive effects of inhibitors of monoacylglycerol lipase in a rat model of inflammatory pain (pages 1464-1478)

Effects of cannabinoids and cannabinoid-enriched Cannabis extracts on TRP channels and endocannabinoid metabolic enzymes (pages 1479-1494)

Symptom-relieving and neuroprotective effects of the phytocannabinoid Δ^9 -THCV in animal models of Parkinson's disease (pages 1495-1506)

Cannabidiol inhibits pathogenic T cells, decreases spinal microglial activation and ameliorates multiple sclerosis-like disease in C57BL/6 mice (pages 1507-1519)

Cannabinoid receptor agonists modulate oligodendrocyte differentiation by activating PI3K/Akt and the mammalian target of rapamycin (mTOR) pathways (pages 1520-1532)

Inhibition of COX-2 expression by endocannabinoid 2-arachidonoylglycerol is mediated via PPAR- γ (pages 1533-1549)

Differential effect of opioid and cannabinoid receptor blockade on heroin-seeking reinstatement and cannabinoid substitution in heroin-abstinent rats (pages 1550-1562)

British Journal of Pharmacology

Special Issue: Themed Issue: Cannabinoids.

Guest Editors: Steve Alexander, Ken Mackie and Ruth Ross

June 2010

Volume 160, Issue 5

Pages 421-783

EDITORIAL

EDITORIAL (pages 421-422)

REVIEWS

Quantification of brain endocannabinoid levels: methods, interpretations and pitfalls (pages 423-442)

- Adenosine-cannabinoid receptor interactions. Implications for striatal function (pages 443-453)
- Cannabinoid CB1 receptor-interacting proteins: novel targets for central nervous system drug discovery? (pages 454-466)
- CB2: a cannabinoid receptor with an identity crisis (pages 467-479)
- The endocannabinoid system as a target for the treatment of neurodegenerative disease (pages 480-498)
- Animal models of cannabinoid reward (pages 499-510)
- Adolescent cannabis use and psychosis: epidemiology and neurodevelopmental models (pages 511-522)
- Phytocannabinoids beyond the Cannabis plant - do they exist? (pages 523-529)
- Endocannabinoid signalling: has it got rhythm? (pages 530-543)
- How important are sex differences in cannabinoid action? (pages 544-548)

RESEARCH PAPERS

- Biochanin A, a naturally occurring inhibitor of fatty acid amide hydrolase (pages 549-560)
- Spinal and peripheral analgesic effects of the CB2 cannabinoid receptor agonist AM1241 in two models of bone cancer-induced pain (pages 561-573)
- A cannabinoid receptor, sensitive to O-1918, is involved in the delayed hypotension induced by anandamide in anaesthetized rats (pages 574-584)
- JWH018, a common constituent of 'Spice' herbal blends, is a potent and efficacious cannabinoid CB1 receptor agonist (pages 585-593)
- N-arachidonoyl glycine, an endogenous lipid that acts as a vasorelaxant via nitric oxide and large conductance calcium-activated potassium channels (pages 594-603)
- GPR55 ligands promote receptor coupling to multiple signalling pathways (pages 604-614)
- Evidence for both inverse agonism at the cannabinoid CB1 receptor and the lack of an endogenous cannabinoid tone in the rat and guinea-pig isolated ileum myenteric Physical and functional interaction between CB1 cannabinoid receptors and β 2-adrenoceptors (pages 627-642)
- Regulation of Fas receptor/Fas-associated protein with death domain apoptotic complex and associated signalling systems by cannabinoid receptors in the mouse brain CB1 cannabinoid receptors promote oxidative/nitrosative stress, inflammation and cell death in a murine nephropathy model (pages 657-668)

- Effects of COX-2 inhibition on spinal nociception: the role of endocannabinoids (pages 669-676)
- The plant cannabinoid Δ 9-tetrahydrocannabivarin can decrease signs of inflammation and inflammatory pain in mice (pages 677-687)
- Cannabinoid-1 receptor activation induces reactive oxygen species-dependent and -independent mitogen-activated protein kinase activation and cell death in human Vasorelaxation to N-oleoylethanolamine in rat isolated arteries: mechanisms of action and modulation via cyclooxygenase activity (pages 701-711)
- The effects of Δ 9-tetrahydrocannabinol and cannabidiol alone and in combination on damage, inflammation and in vitro motility disturbances in rat colitis (pages Drug- and cue-induced reinstatement of cannabinoid-seeking behaviour in male and female rats: influence of ovarian hormones (pages 724-735)
- Endocannabinoid modulation of hyperaemia evoked by physiologically relevant stimuli in the rat primary somatosensory cortex (pages 736-746)
- Neuroprotective potential of CB1 receptor agonists in an in vitro model of Huntington's disease (pages 747-761)
- A role for L- α -lysophosphatidylinositol and GPR55 in the modulation of migration, orientation and polarization of human breast cancer cells (pages 762-771)
- Involvement of 2-arachidonoyl glycerol in the increased consumption of and preference for ethanol of mice treated with neurotoxic doses of methamphetamine (pages 772-783)