

The Medical Cannabis Advocate's Handbook

A PATIENT'S HISTORY of MEDICAL CANNABIS

Marijuana, in its natural form, is one of the safest therapeutically active substances known... The evidence in this record clearly shows that marijuana has been accepted as capable of relieving the distress of great numbers of very ill people... It would be unreasonable, arbitrary and capricious for DEA to continue to stand between those sufferers and the benefits of this substance.

—Francis L. Young, DEA Chief Administrative Law Judge



**AmericansFor
SafeAccess**

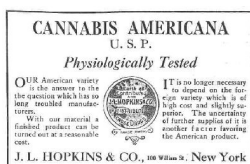
Advancing Legal Medical Marijuana Therapeutics and Research

Cannabis as Medicine: What the Science Says

If Cannabis were unknown, and bio-prospectors were suddenly to find it in some remote mountain crevice, its discovery would no doubt be hailed as a medical breakthrough. Scientists would praise its potential for treating everything from pain to cancer, and marvel at its rich pharmacopoeia—many of whose chemicals mimic vital molecules in the human body.

—The Economist

It can be difficult to locate information about the safety and therapeutic value of cannabis. The unfortunate result of the federal prohibition of cannabis is limited clinical research to



investigate the safety and efficacy of cannabis to control symptoms of serious and chronic illness. Many scientists have noted research is "hindered by a

complicated federal approval process, limited availability of research grade marijuana, and the debate over legalization."¹

However, the documented use of cannabis as a safe and effective therapeutic botanical dates to 2700 B.C. Between 1840 and 1900, European and American journals of medicine published more than 100 articles on the therapeutic use of cannabis. In fact, cannabis was part of the American pharmacopoeia until 1942, and is currently available by prescription in Canada and the Netherlands.



The political interference in the regulation of cannabis as a medicine and subsequently the control of medical cannabis research originates with the passage of the Marijuana Tax Act in 1937. Over the objections of the American Medical Association,² the United States enacted the first federal law designed to restrict access to cannabis, even for medical purposes. Despite decades of repeated reviews by local, federal and international commissions and emerging clinical science which confirm the relative safety and efficacy of cannabis as a medicine, the use of cannabis is absolutely

prohibited—even for medical purposes.

LAGUARDIA REPORT (1944)

The Marijuana Tax Act did not end the debate about whether cannabis, if appropriately controlled, could have therapeutic value. In 1939, New York Mayor Fiorello LaGuardia appointed a blue-ribbon panel of renowned physicians, psychiatrists, clinical psychologists, pharmacologists, chemists and other scientific and medical researchers to conduct a review of the assertions that smoking marijuana resulted in criminal behavior, and a deterioration of physical and mental health.

Two years before the final report was issued, a review of the findings was published in the American Journal of Psychiatry which concluded that "prolonged use of [cannabis] does not lead to physical, mental or moral degeneration, nor have we observed any permanent deleterious effects from its continued use. Quite the contrary, [cannabis] and its derivatives and allied synthetics have potentially valuable therapeutic applications which merit further investigation." Prepared by the New York Academy of Medicine and issued in 1944, the LaGuardia Report echoed these conclusions, adding that cannabis was not addictive, did not provide a gateway to other drugs of abuse, and was not associated with increased criminal behavior or juvenile delinquency.

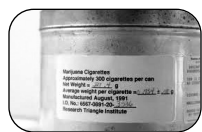
THE NATIONAL COMMISSION ON MARIHUANA AND DRUG ABUSE (1972)

The Comprehensive Drug Abuse Prevention and Control Act of 1970 included a provision

to study the abuse of cannabis in the United States. President Richard Nixon appointed Pennsylvania Governor Raymond Shafer to chair the National Commission on Marihuana and Drug Abuse. On March 22, 1972, the commission presented its report, *Marijuana, A Signal of Misunderstanding*, to Congress.

The Shafer report, like the LaGuardia report before it, concluded that the risks of using cannabis were minimal and that general use did not jeopardize health, lead to experimentation with other drugs, or cause criminal activity and specifically recommended the decriminalization of marijuana for personal use. The recommendations provided in the Commission's report conflicted with many of the provisions provided in the Comprehensive Drug Abuse Prevention and Control Act and the Controlled Substances Act. President Nixon needed to reject the recommendations and formally declare a "war on drugs".

INVESTIGATIONAL NEW DRUG COMPASSIONATE ACCESS (1978)



In 1975, shortly after discovering that smoking cannabis could relieve symptoms of his glaucoma, Washington, DC resident Robert Randall was arrested for cultivating cannabis in his home. Citing clinical evidence, Mr. Randall successfully used the Common Law Doctrine of Necessity to fight the charges. In November 1976, Judge James Washington opined, "[w]hile blindness was shown by competent medical testimony to be the otherwise inevitable result of the defendant's disease, no adverse effects from the smoking of marijuana have been demonstrated. Medical evidence suggests that the medical prohibition is not well-founded."

Mr. Randall petitioned the federal government to provide him with access to medical cannabis in accordance with his medical necessity and shortly thereafter became the first American to receive a government-supplied source of cannabis. When Mr. Randall



ROBERT RANDALL

Known as the "Father of the Modern Medical Cannabis Movement," Robert Randall was the patient who made legal history when he persuaded a federal court that his use of cannabis was a matter of medical necessity.

In 1972, at the age of 24, Randall had already lost sight in his right eye, when he was diagnosed with a serious form of glaucoma and told that he had at most three to five years until he would go blind. His ophthalmologist tried a variety of medications, but nothing was effective. Surgery was ruled out.

Randall soon had to quit his job and ended up on welfare. Then he discovered that cannabis helped his vision considerably. He returned to work and began to grow his own medicine. In 1975 he was arrested, and in 1976 he stood trial and established a defense of necessity.

The charges were dismissed. His attorneys had also petitioned the Food and Drug Administration to have him included in a research program that would give him 10 joints a day. As a result, he became the first person to receive a legal, regular supply of 300 medical cannabis cigarettes per month provided by the federal government.

This led to the creation of the Compassionate Investigational New Drug Program (IND Program), which gave him sustained access to this non-approved drug. The Federal IND program was eventually opened to others with medical necessity, but it remained limited to little more than a dozen patients.

Randall spent the rest of his life as an activist, organizing other patients and writing books about medical cannabis. He kept his vision for the remaining 36 years of his life.

went public with his victory, the federal government retaliated with threats to withdraw his access to cannabis. In 1978, Mr. Randall filed suit and within days federal agencies requested to settle. As a result, the FDA established the Investigational New Drug (IND) Compassionate Access Program to supply individuals who suffered from severe or chronic illness with a monthly supply of cannabis, up to nine pounds annually.

In 1992, in response to an overwhelming number of applications from people suffering the effects of AIDS, President H.W. Bush closed the program to all new applicants, citing concerns that the program undermined the "war on drugs." Today, a handful of surviving IND-participants continue to receive medical cannabis from the U.S. government, paid for by federal tax dollars.

In 2002, a study of the individuals that have used standardized, heat-sterilized, quality-controlled cannabis as part of the federal IND program demonstrated the long-term clinical effectiveness of cannabis in treating the chronic musculoskeletal pain, spasm and nausea, and spasticity associated with Multiple Sclerosis. After using cannabis supplied by the federal government for periods ranging between 11 and 27 years, program participants showed no functionally significant problems in their physiological systems, as determined by MRI scans of the brain, pulmonary function tests, chest X-ray, neuropsychological tests, hormone and immunological assays, electroencephalography, P300 testing and neurological clinical examinations.³



INSTITUTE OF MEDICINE (1982, 1999)

In 1982, the Institute of Medicine (IOM), a division of the National Academy of Sciences, published the report *Marijuana and Health*. The IOM noted that "Preliminary studies suggest that marijuana and its derivatives or analogues might be useful in the treatment of the raised intraocular pressure of glaucoma,

in the control of the severe nausea and vomiting caused by cancer chemotherapy, and in the treatment of asthma."⁴

More than a decade later, in response to state laws that permitted the use of cannabis in accordance with a recommendation by a licensed physician, the White House Office of National Drug Control Policy commissioned another report from the IOM to assess the medical and scientific value of cannabis. In 1999 the IOM published *Marijuana as Medicine: Assessing the Science Base*, a comprehensive meta-analysis of all existing research concerning the therapeutic value of cannabis.⁵ In describing the findings of the IOM review, the Congressional Research Service observes that "[f]or the most part, the IOM Report straddled the fence and provided sound bites for both sides of the medical marijuana debate."⁶

Both IOM reports conclude that there is a sound medical and scientific basis for using cannabis as treatment for a variety of serious or chronic medical conditions. They emphasize the need for continued research with a focus on well-designed clinical trials aimed at developing rapid-onset, reliable, and safe delivery systems. Congress and executive agencies have largely ignored these findings and have never convened a panel to oversee the full implementation of recommendations.

THE HOUSE OF LORDS SELECT COMMITTEE ON SCIENCE & TECHNOLOGY REPORT (1998)

In 1998, the British House of Lords Select Committee on Science and Technology issued a remarkably comprehensive report on cannabis including testimony from people with serious illness, scientific researchers, and physicians. The report recommended immediately rescheduling cannabis so that doctors could prescribe cannabis to their patients and pharmacies could safely distribute cannabis. This recommendation was made in part because the committee acknowledged that individuals using cannabis for therapeutic purposes "are caught in the front line of the war against drug abuse. This makes criminals of

people whose intentions are innocent, it adds to the burden on enforcement agencies, and it brings the law into disrepute. Legalising medical use on prescription, in the way that we recommend, would create a clear separation between medical and recreational use, under control of the health care professions."⁷

The report recommended "that clinical trials of cannabis for the treatment of MS and chronic pain should be mounted as a matter of urgency." Specifically, the committee recommended that research focus on alternative modes of administration that "would retain the benefit of rapid absorption offered by smoking, without the adverse effects."



CB1 receptor

THE ENDOCANNABINOID SYSTEM (ECS)

Humans have used opiate drugs such as morphine and heroin for thousands of years to lessen pain and produce euphoria. In 1973, scientists discovered the brain's opiate receptor which suggested that opiate drugs work primarily by mimicking natural opiate-like molecules, like endorphins, made and used in the brain. The discovery of opiate receptors has revolutionized pain management, including the development of powerful therapeutic drugs like morphine, codeine, and oxycodone.

Similarly, humans have used the cannabis plant for thousands of years to reduce pain, control nausea, stimulate appetite, control anxiety, and produce feelings of euphoria. In the past 30 years, however, researchers have

made new discoveries that help us better understand why and how cannabis works so well for so many people.

The therapeutic benefits of cannabis are derived from the interactions of cannabinoids and the human body's own endocannabinoid system. The endocannabinoid system (ECS) is a sophisticated group of neuromodulators, their receptors, and signaling pathways involved in a variety of physiological processes including the regulation of movement, mood, memory, appetite, and pain.

Prominent researcher and author Dr. Ethan Russo has one of the most comprehensive descriptions of the ECS¹⁶:

The analgesic and palliative effects of the cannabis and cannabinoid preparation have been amply reported over the past generation, and have similarly been reviewed at length in previous citations. In essence, the effects result from a combination of receptor and nonreceptor mediated mechanisms. THC and other cannabinoids exert many actions through cannabinoid receptors, G-protein coupled membrane receptors that are extremely densely represented in central, spinal, and peripheral nociceptive pathways. Endogenous cannabinoids (endocannabinoids) even regulate integrative pain structures such as the periaqueductal gray matter. The endocannabinoid system also interacts in numerous ways with the endogenous opioid and vanilloid systems that can modulate analgesia and with a myriad of other neurotransmitter systems such as the serotonergic, dopaminergic, glutamatergic, etc, pertinent to pain. Research has shown that the addition of cannabinoid agonists to opiates enhances analgesic efficacy markedly in experimental animals, helps diminish the likelihood of the development of opiate tolerance, and prevents opiate withdrawal. The current author has suggested that a clinical endocannabinoid deficiency may underlie the pathogenesis of migraine, fibromyalgia, idiopathic

bowel syndrome, and numerous other painful conditions that defy modern pathophysiological explanation or adequate treatment.⁸

Thirty years ago, the endocannabinoid system was unknown; our understanding of the ECS began in the mid-1980s when researchers first identified the presence of a cannabinoid receptor in the brain and cloned it. Since then, two types of receptors, CB1 and CB2, have been identified and these discoveries have dramatically increased our understanding about how cannabis and related cannabinoids affect the human body.⁹⁻¹⁰

CB1 receptors are found in the central nervous system and in other organs and tissues such as the eyes, lungs, kidneys, liver and digestive tract and are particularly well-represented in the brain. In fact, the brain's receptors for cannabinoids far outnumber the opiate receptors, perhaps by as much as ten to one. The relative safety of cannabis is reflected in the fact that cannabinoid receptors are virtually absent from those regions at the base of the brain that are responsible for such vital functions as breathing and blood pressure control. CB2 receptors are primarily located in tissues associated with immune function such as the spleen, thymus, tonsils, bone marrow, and white blood cells.

Research is helping scientists and physicians understand the role of the endocannabinoid system in regulating a variety of bodily functions. As noted by world-renowned author and researcher, Raphael Mechoulam, the discovery of the endocannabinoid system has generated a great deal of interest in identifying opportunities for the development of a wide variety of cannabis-based and other cannabinoid therapeutic drugs.¹¹

EMERGING CLINICAL DATA: THE THERAPEUTIC POTENTIAL OF CANNABIS

While research in the United States has been sharply restricted by the federal prohibition on cannabis in the past, the last few years have seen rapid change. The International Cannabinoid Research Society (ICRS) was formally incorporated as a scientific research organization in 1991, and since its incorporation the membership has more than tripled. The International Association for Cannabis as Medicine (IACM) was founded in 2000, publishes a bi-weekly newsletter and holds a bi-annual symposium to highlight emerging clinical research concerning cannabis therapeutics. The University of California established the Center for Medical Cannabis Research (CMCR) in 2001 to conduct high

quality scientific studies intended to ascertain the general medical safety and efficacy of cannabis products and examine alternative forms of cannabis administration. In 2010, the CMCR issued a report on the 14 clinical studies it has conducted, most of which were FDA-approved, double-blind, placebo-controlled clinical studies that have

demonstrated that cannabis can control pain, in some cases better than the available alternatives.¹³

A 2009 review of controlled clinical studies conducted over a 38-year period, including 33 trials in the U.S., found that "nearly all of the 33 published controlled clinical trials conducted in the United States have shown significant and measurable benefits in subjects receiving the treatment."¹³ The review's authors note that the more than 100 different cannabinoids in cannabis have the capacity for analgesia through neuromodulation in ascending and descending pain pathways, neuroprotection, and anti-inflammatory mechanisms—all of which indicates that cannabis has applica-

FEDERATION OF AMERICAN SCIENTISTS

"Based on much evidence, from patients and doctors alike, on the superior effectiveness and safety of whole cannabis compared to other medications,... the President should instruct the NIH and the FDA to make efforts to enroll seriously ill patients whose physicians believe that whole cannabis would be helpful to their conditions in clinical trials"

FAS Petition on Medical Marijuana, 1994

tions in managing chronic pain, muscle spasticity, cachexia, and other debilitating conditions.



To date, more than 15,000 modern peer-reviewed scientific articles on the chemistry and pharmacology of cannabis and cannabinoids have been published, as well as more than 2,000 articles on the body's natural endocannabinoids.

Currently, cannabis is most often recommended as complementary or adjunct medicine. But there is a substantial consensus among experts in the relevant disciplines, including the American College of Physicians, that cannabis and cannabis-based medicines have therapeutic properties that could potentially treat a variety of serious and chronic illness. What follows is a brief, annotated compilation of relevant works representing the emerging clinical data which support the therapeutic use of cannabis.

CANNABIS & CANCER

People with cancer who must undergo radiation and chemotherapy frequently stop treatments rather than suffer the nausea, pain, and other unpleasant side effects. Years before any state had authorized the medical use of cannabis, a 1991 Harvard Medical School study revealed that nearly half (44%) of U.S. oncologists were recommending cannabis to their patients as a way of mitigating the side effects of cancer treatments.¹⁴

In its 1999 review, the Institute of Medicine concluded that cannabis could be a valid alternative for many people living with cancer. Specifically, the IOM notes, "In patients already experiencing severe nausea or vomiting, pills are generally ineffective, because of the difficulty in swallowing or keeping a pill down, and slow onset of the drug effect."¹⁵

Since the release of the IOM report, new research has been published which supports the use of cannabis to curb the debilitating effects of cancer treatment. In 2001, a review

of clinical studies conducted in several states during the past two decades revealed that, in 768 individuals with cancer, cannabis was a highly effective anti-emetic in chemotherapy.¹⁶ Other studies have concluded that the active components in cannabis produce palliative effects in cancer patients by preventing nausea, vomiting and pain and by stimulating appetite. Researchers have also observed that "these compounds have been shown to inhibit the growth of tumor cells in culture and animal models by modulating key cell-signaling pathways. Cannabinoids are usually well tolerated, and do not produce the generalized toxic effects of conventional chemotherapies."¹⁷

COMBATING CHEMOTHERAPY

Cannabis is used most often to combat nausea induced by chemotherapy agents and pain caused by various cancers. More than 30 human clinical trials have examined the effects of cannabis or synthetic cannabinoids on nausea,¹⁸ not including several U.S. state trials that took place between 1978 and



1986.¹⁹ In reviewing this literature, scientists have concluded that, "... THC [delta-9-tetrahydrocannabinol] is superior to placebo, and equivalent in effectiveness to other widely-used anti-emetic drugs, in its capacity to reduce the nausea and vomiting caused by some chemotherapy regimens in some cancer patients."²⁰

A 1998 review by the British House of Lords Science & Technology Select Committee con-

cluded that "cannabinoids are undoubtedly effective as anti-emetic agents in vomiting induced by anti-cancer drugs. Some users of both find cannabis itself more effective."²¹ The House of Lords review builds upon data provided in a 1997 inquiry by the British Medical Association that determined cannabis is, in some cases, more effective than Marinol.²²

CANCER-FIGHTING CANNABINOIDS

Recent scientific advances in the study of cannabinoid receptors and endocannabinoids have produced exciting new leads in the search for anti-cancer treatments. In the past decade, scores of studies, both in vivo and in vitro, have demonstrated that various cannabinoids have a significant effect fighting cancer cells. To date, studies have shown that cannabinoids arrest many kinds of cancer growths through promotion of apoptosis (programmed cell death) that is lost in tumors, and by arresting angiogenesis (increased blood vessel production). Unlike conventional chemotherapy treatments which work by creating a toxic environment in the body that frequently compromises overall health, cannabinoids have been shown to selectively target only cancer tumor cells.

Cannabinoids and Tumor Reduction

The direct anti-tumor and anti-proliferation activity of cannabinoids, specifically CB1 and CB2 agonists, has now been demonstrated in dozens of studies across a range of cancer types, including brain (gliomas), breast, liver, leukemic, melanoma, pheochromocytoma, cervical, pituitary, prostate and bowel.²³⁻⁴⁰ The anti-tumor activity has led in laboratory animals and in-vitro human tissues to regression of tumors, reductions in vascularisation (blood supply) and metastases (secondary tumors), as well as the direct destruction of cancer cells

(apoptosis).⁴¹⁻⁴⁵ Indeed, research on the complex interactions of endogenous cannabinoids and receptors is leading to greater scientific understanding of the basic mechanisms by which cancers develop.⁴⁶

In multiple studies published between 2001 and 2003, cannabinoids inhibited tumor growth in laboratory animals.⁴⁷⁻⁵⁰ In another study, injections of synthetic THC eradicated malignant brain tumors in one-third of treated rats, and prolonged life in another third by as long as six weeks.^{51, 52} And, research on pituitary cancers suggest that cannabinoids may be the key to regulating human pituitary hormone secretion.⁵³⁻⁵⁶ A 2009 review of recent

studies that have focused on the role of cannabinoids and cannabinoid receptors in the treatment of breast cancer notes that cannabinoids have been shown in laboratory models to be effective fighting many types of cancers.⁵⁷

AMERICAN ACADEMY of FAMILY PHYSICIANS

"The American Academy of Family Physicians [supports] the use of marijuana ... under medical supervision and control for specific medical indications."

1996-1997 AAFP Reference Manual

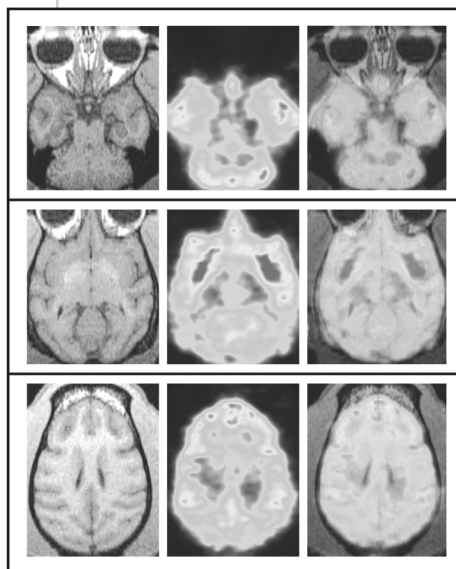
Recent research published in 2009 has found that the non-psychoactive cannabinoid cannabidiol (CBD) inhibits the invasion of both human cervical cancer and human lung cancer cells. By manipulating cannabidiol's up-regulation of a tissue inhibitor, researchers may have revealed the mechanism of CBD's tumor-fighting effect. A further in vivo study demonstrated "a significant inhibition" of lung cancer metastasis in mice treated with CBD.⁵⁸ The mechanism of the anti-cancer activity of CBD and other cannabinoids has also been repeatedly demonstrated with breast cancers.⁵⁹⁻⁶³

Also in 2009, scientists reported on the anti-tumor effects of the cannabinoid THC on cholangiocarcinoma cells, an often-fatal type of cancer that attacks the liver's bile ducts. They found that "THC inhibited cell proliferation, migration and invasion, and induced cell apoptosis." At low levels, THC reduced the migration and invasion of cancer cells, while

at high concentrations, THC triggered cell-death in tumors. In short, THC reduced the activity and number of cancer cells. This dose-dependent action of cannabinoids on tumors has also been demonstrated in animal studies.

Research on cannabinoids and gliomas, a type of aggressive brain cancer for which there is no cure, holds promise for future treatments. A study that examined both animal and human glioblastoma multiforme (GBM)

tumors, the most common and aggressive form of brain cancer, describes how cannabinoids controlled glioma growth by regulating the blood vessels that supply the tumors.⁶⁴ In another study, researchers demonstrated that the administration of the non-psychoactive cannabinoid



Cannabinoid receptors in the brain

cannabidiol (CBD) significantly inhibited the growth of subcutaneously implanted U87 human glioma cells in mice. The authors of the study noted that "... CBD was able to produce a significant antitumor activity both in vitro and in vivo, thus suggesting a possible application of CBD as an antineoplastic agent."⁶⁵

The targeted effects of cannabinoids on GBM were further demonstrated in 2005 by researchers who showed that the cannabinoid THC both selectively inhibited the proliferation of malignant cells and induced them to die off, while leaving healthy cells unaffected.⁶⁶ While CBD and THC have each been demonstrated to have tumor-fighting properties, research published in 2010 shows that CBD enhances the inhibitory effects of THC on GBM cell proliferation and survival.⁶⁷

Similarly, researchers reported in 2010 that the way cannabinoid and cannabinoid-like receptors in brain cells "regulate these cells' differentiation, functions and viability" suggests cannabinoids and other drugs that target cannabinoid receptors can "manage neuroinflammation and eradicate malignant astrocytomas," a type of glial cancer.⁶⁸ These recent studies confirm the findings of multiple studies that indicated the effectiveness of cannabinoids in fighting gliomas.⁶⁹⁻⁷⁶

Indications of the remarkable potential of cannabinoids to fight cancer in humans have also been seen in three large-scale population studies done recently. The studies were designed to find correlations between smoking cannabis and cancers of the lung, throat, head and neck. Instead, the researchers discovered that the cancer rates of cannabis smokers were at worst no greater than those who smoked nothing at all or even better.⁷⁷ One study found that 10-20 years of cannabis use significantly reduced the incidence of head, neck and throat cancers.⁷⁸ Researchers suggest that cannabinoids may produce a prophylactic effect against cancer development, as seen in the anti-proliferation effect that has been demonstrated in vitro and in vivo.

CANNABIS & HIV/AIDS AND HEP-C

Cannabis helps to improve the lives of many people living with HIV/AIDS; it helps manage appetite loss, wasting, nausea, vomiting, pain, anxiety, stress, depression and other symptoms of both the disease and the anti-retroviral regimes used to treat it. As many as 1 in 4 people living with HIV/AIDS use cannabis for medical purposes.⁷⁹

An international group of nursing researchers has determined from a longitudinal, multi-country, multi-site, randomized-control clinical trial that cannabis is frequently used to manage the six common symptoms of HIV/AIDS. The study, published in 2009, found that a significant percentage of those with HIV/AIDS find cannabis effective for anxiety, depression, fatigue, diarrhea, nausea, and peripheral neu-

ropathy. Researchers note that "those who did use marijuana rate it as effective as prescribed or over the counter medicines for the majority of common symptoms...."⁸⁰

In addition to symptoms of the disease, cannabis has proven to be effective in controlling unpleasant effects of the drugs used to treat HIV/AIDS. People living with HIV/AIDS who use cannabis to combat the side-effects of HAART therapy are approximately 3 times more likely to remain on their prescribed drug therapies than those who do not use cannabis, according to a 2007 study.⁸¹

In the 1970s, a series of human clinical trials established cannabis' ability to stimulate food intake and weight gain in healthy volunteers. In a randomized trial in people living with AIDS, THC significantly improved appetite and nausea in comparison with placebo. There were also trends towards improved mood and weight gain. Unwanted effects—dry mouth, drowsiness and anxiety—were generally mild or moderate in intensity.⁸²⁻⁸⁵

After a comprehensive review of the therapeutic potential of cannabis, the Institute of Medicine concluded, "For patients such as those with AIDS or who are undergoing chemotherapy and who suffer simultaneously from severe pain, nausea, and appetite loss, cannabinoid drugs might offer broad-spectrum relief not found in any other single medication."

An FDA-approved preliminary safety trial of smoked cannabis was conducted in 2003 at the University of California at San Francisco. The study concluded that neither synthetic THC nor inhaled cannabis had any significant effect on the immune system or viral load. Moreover, the researchers noted that study participants who used cannabis gained weight.⁸⁶

The Clinical Trials: Neuropathic Pain

More than one-third of people living with HIV/AIDS suffer from excruciating pain in the nerve endings, many in response to the antiretroviral therapies that constitute the first line of treatment for HIV/AIDS.⁸⁷ As a result, some



"BROWNIE MARY" RATHBUN

"Brownie Mary," as Mary Rathbun was affectionately called, was well known around the city of San Francisco for her courageous work as a volunteer at San Francisco General Hospital AIDS Ward 86.

Mary baked marijuana brownies for "her kids" for many years before Proposition 215 made it legal in California. Three times she was arrested for the crime of giving free medicine to people with AIDS, but she remained committed to her work. The last time she was arrested was July 21, 1992, while delivering medicine to patients in Sonoma County. Before she came to trial, The City and County of San Francisco proclaimed a special day in her honor that coincided with her trial date. The charges were dropped.

Mary also used cannabis herself, to help cope with the discomfort of having two artificial knees as a result of arthritis, which crippled her in her late years. Despite this, she kept delivering brownies of compassion for as long as she could.

"Brownie Mary" died April 10, 1999, having seen medical marijuana legalized in California and several other states.

individuals reduce or discontinue their HIV/AIDS therapy because they can neither tolerate nor diminish the debilitating side effects of the antiretroviral first-line medications.

The effectiveness of cannabis and cannabinoids in relieving neuropathic pain has been demonstrated in more than three dozen pre-clinical and clinical trials, a 2009 review by researchers at the University of Georgia has found. The scientists note that "a large number of research articles have demonstrated the efficacy of cannabinoids" and conclude that "cannabinoids show promise for treat-



BARB & KENNY JENKS

Kenny Jenks was a hemophiliac who contracted AIDS through contaminated blood in 1980 and then unknowingly infected his wife, Barbara. Both became too sick to work, and they lived on disability. Like many AIDS patients, they discovered cannabis helped them eat and gain strength.

After they were arrested and charged with three felonies for cultivating cannabis, their lawyer argued this was a case of medical necessity. Cannabis was the only medicine that lessened the vomiting and nausea caused by AIDS and the drugs used to fight the disease. The Court of Appeals in Tallahassee, Florida ruled in their favor in 1991.

After that lengthy legal struggle, the DEA allowed them into the federal Compassionate IND program. At the time, more than 30 people suffering from serious illnesses had successfully proven their medical necessity and were approved to receive federal cannabis.

The Jenks went public with their story, and soon more than 300 other AIDS patients had applied to the program. The sudden surge in applicants prompted the Bush Administration to shut down the intake program in 1992. Even those who had already been approved were denied access to the medicine, and only the few patients who were previously receiving government cannabis at that time have been allowed to continue to do so.

The Jenks' crusade for justice and compassion had been wiped out at the moment of its triumph. The stress of their personal ordeal took a toll on the couple's health. Both Barb and Kenny died soon after the IND program was closed to new patients.

ment of neuropathic pain."⁸⁸

A series of double-blind, placebo-controlled studies of people living with HIV/AIDS have

demonstrated that cannabis can reduce neuropathy pain and promote weight gain without immunological compromise.⁸⁹

Researchers at the University of California, San Francisco conducted a randomized, placebo-controlled clinical trial of 50 people who had experienced neuropathy pain for an average of six years. Results showed that smoked cannabis was well-tolerated and effectively relieved chronic neuropathic pain from HIV-associated sensory neuropathy.⁹⁰

Another double-blind, placebo-controlled, crossover trial evaluated concentration-response effects of low-, medium-, and high-dose smoked cannabis, concluding that there is a window of modest analgesia for smoked cannabis, with lower doses decreasing pain and higher doses increasing pain.⁹¹

A separate clinical trial indicated that low- and high-dose cannabis produced similar levels of pain relief, reducing both the intensity and unpleasantness of unbearable nerve pain. Researchers found that cannabis may interact with opiate-based painkillers to increase their effectiveness, particularly in neuropathic pain, but that using isolated synthetic cannabinoids such as THC (dronabinol) did not provide the same degree of efficacy as a whole-plant preparation of cannabis.⁹²

A double-blind, placebo-controlled clinical trial on the impact of smoked cannabis on 28 people living with HIV who experience neuropathy pain not adequately controlled by other pain-relievers, including opiates, found that cannabis provided pain relief.⁹³

HEPATITIS-C VIRUS

Cannabis may improve the effectiveness of drug therapy for the hepatitis C virus (HCV), a potentially deadly viral infection that affects more than 3 million Americans. Treatment for Hepatitis-C virus (HCV) involves months of therapy with two powerful drugs, interferon and ribavirin, that have severe side effects, including extreme fatigue, nausea, muscle aches, loss of appetite and depression. Due to

these side effects, people often do not finish treatment, which worsens their symptoms and can promote harm to the liver.

Researchers from the University of California, San Francisco medical school and the Organization to Achieve Solutions in Substance-Abuse (OASIS) found that "modest cannabis use may offer symptomatic and virological benefit to some patients undergoing HCV treatment by helping them maintain adherence to the challenging medication regimen."⁹⁴ Other research suggests that people combating HCV who used cannabis while undergoing combination ribavirin and interferon treatment were about 3 times more likely to complete their conventional medical treatment than those participants who did not use cannabis.

While cannabis may have a specific, positive biomedical effect, it is more likely that it improves appetite and offers psychological benefits such as reduced depression that help individuals tolerate the treatment's unpleasant side effects.⁹⁵

CHRONIC PAIN

According to the American Academy of Pain, nearly 50 million Americans suffer from persistent pain. Unfortunately, it is estimated that four out of every ten people living with moderate-to-severe pain have yet to experience relief. After reviewing a series of trials in 1997, the U.S. Society for Neuroscience concluded that "substances similar to or derived from marijuana could benefit the more than 97 million Americans who experience some form of pain each year."⁹⁶

Although a wide variety of prescription analgesic drugs are available to treat pain—from aspirin to oxycontin—none of these drugs are completely adequate and many cause severe

side-effects with continued use. Drugs such as aspirin can cause stomach irritation and in some cases ulceration. Prolonged use of acetaminophen can result in liver damage. Ibuprofen can cause kidney failure. Opiates are notorious for triggering severe nausea, disorientation and drowsiness, while prolonged use can increase tolerance and, in some cases, result in severe dependence or addiction to the medication. Each of these analgesics can produce fatal overdose.

The historical use of cannabis as an analgesic is well documented, as is its remarkable safety record.^{97, 98} In their meta-analysis of the available data, the Institute of Medicine acknowledged the wide

use of cannabis for pain, noting that "after nausea and vomiting, chronic pain was the condition cited most often to the IOM study team as a medicinal use for marijuana."⁹⁹ Currently, pain relief is by far the most common condition for which physicians recommend the use of cannabis.

Many well-designed, double-blind placebo-controlled clinical trials clearly demonstrate that cannabis can reduce neuropathic pain, as noted above. In advance of these clinical trials involving smoked cannabis, years of clinical studies confirmed that the active ingredients in cannabis have powerful analgesic effects, sometimes equivalent to codeine or morphine.¹⁰⁰⁻¹⁰⁴ A review of the body of scientific research concerning the analgesic effects of cannabis concluded that "[t]here is now unequivocal evidence that cannabinoids are antinociceptive [capable of blocking the transmission of pain] in animal models of acute pain."¹⁰⁵

Research shows that cannabinoids also produce an entourage effect that enhances the effectiveness of opiate painkillers. One animal

INSTITUTE OF MEDICINE

"Nausea, appetite loss, pain and anxiety . . . all can be mitigated by marijuana.... For patients, such as those with AIDS or undergoing chemotherapy, who suffer simultaneously from severe pain, nausea, and appetite loss, cannabinoid drugs might offer broad spectrum relief not found in any other single medication."

**Marijuana and Medicine:
Assessing the Science Base, 1999**

study found morphine was 15 times more active with the addition of a small dose of THC. Codeine was enhanced on the order of 900 fold.¹⁰⁶ Human studies have repeatedly shown that cannabinoids work in concert with opioid drugs in relieving neuropathic pain. Researchers suggest that direct and indirect interactions between opioid and cannabinoid receptors not only enhance analgesia but may also reduce the development of tolerance to opiates. The authors of a 2009 study conclude that further research on such interactions is "critical for understanding how the receptor systems involved in pain relief are altered during acute or chronic pain," as well as designing better therapies that "directly target the altered neurophysiology of patients experiencing pain."¹⁰⁷

Decades of research on cannabis' effectiveness in pain management include clinical human trials and volumes of anecdotal evidence, as well as new understanding of how activation of the cannabinoid system in the central nervous system reduces sensitivity to pain.¹⁰⁸⁻¹¹² Some of the most encouraging clinical data on the effects of cannabinoids on pain involve the treatment of intractable cancer pain and hard-to-treat neuropathic pain. Somewhere between 25% and 45% of cancer patients experience neuropathic pain, a type of chronic pain that frequently results from nerve injury and resists treatment.

The effectiveness of cannabis and cannabinoids in relieving neuropathic pain has been demonstrated in more than three dozen pre-clinical and clinical trials, as noted in a 2009 review. The review notes that "a large number of research articles have demonstrated the efficacy of cannabinoids" for treating neuropathic pain and concludes that "cannabi-

noids show promise for treatment."¹¹³

Multiple clinical trials have shown that a dosage-controlled whole-plant extract of marijuana (Sativex) relieves intractable cancer pain, and does so better than THC alone. A recent double blind, randomized, placebo-controlled trial of 360 cancer patients in 14 countries found that pain scores improved significantly with a cannabis extract. Researchers report that the combination of natural cannabinoids in Sativex "is an efficacious adjunctive treatment for cancer-related pain"

for patients who do not get relief from opiate painkillers such as oxycodone or vicodin.¹¹⁴

Pain from spinal injuries may also be treatable with cannabis. Several sets of researchers have recently published findings on the efficacy of cannabinoids in treating pain resulting from spinal cord injuries (SCI). A French team, noting that "very few pharma-

cological studies have dealt specifically with neuropathic pain related to SCI," suggests that for "refractory central pain, cannabinoids may be proposed on the basis of positive results in other central pain conditions (e.g. multiple sclerosis)."¹¹⁵ Researchers have demonstrated in an animal model of SCI pain that cannabinoids yield more consistent positive results than conventional analgesics such as opiates, which "decrease in efficacy with repeated treatment over time," concluding that drugs targeting the body's cannabinoid receptors "hold promise for long-term use in alleviating chronic SCI pain."¹¹⁶

Researchers have also determined that neuropathic pain may be treatable via bolstering the body's natural cannabinoids. A study that inhibited the two enzymes that break down the body's natural cannabinoids found that preserving them "reduces neuropathic pain

NEW ENGLAND JOURNAL of MEDICINE

"A federal policy that prohibits physicians from alleviating suffering by prescribing marijuana to seriously ill patients is misguided, heavy-handed, and inhumane.... It is also hypocritical to forbid physicians to prescribe marijuana while permitting them to prescribe morphine and meperidine to relieve extreme dyspnea and pain...there is no risk of death from smoking marijuana.... To demand evidence of therapeutic efficacy is equally hypocritical"

**Jerome P. Kassirer, MD, editor
N Engl J Med 336:366-367, 1997**

through distinct receptor mechanisms of action" that "present viable targets" for developing new analgesic drugs.¹¹⁷⁻¹¹⁸

MULTIPLE SCLEROSIS

A survey of people living with Multiple Sclerosis reported that more than 40 percent of respondents used cannabis to relieve symptoms of the disease. Among them, nearly three quarters said that cannabis mitigated their spasms, and more than half said it alleviated their pain. Similar results were published in the Canadian Journal of Neurological Sciences where it was observed that 96% of Canadians living with MS believe that cannabis is therapeutically useful for treating the disease. Of those who admitted using cannabis to treat symptoms of MS, the majority cited relief of chronic pain, spasticity, and depression.¹¹⁹

Numerous case studies, surveys and double-blind studies have reported improvement in those treated with cannabis and related cannabinoids for symptoms including spasticity, chronic pain, tremor, sexual dysfunction, bowel and bladder dysfunctions, vision dimness, dysfunctions of walking and balance (ataxia), and memory loss.¹²⁰⁻¹²⁴ In fact, cannabinoids have been shown in animal models to measurably lessen MS symptoms and may also slow or halt the progression of the disease.¹²⁵ Researchers have discovered that persons with multiple sclerosis have increased levels of endocannabinoids in their blood, indicating that the endocannabinoid system "may be dynamically modulated depending on the subtype of the disease."¹²⁶

Previous studies of the pharmacology of cannabis have identified effects on motor systems of the central nervous system that have the potential of affecting tremor and spasticity. A controlled study of the efficacy of THC in experimental allergic encephalomyelitis, the animal model of MS, demonstrated significant amelioration of these two MS symptoms. A review of six randomized controlled trials of a cannabis extracts that combines



ED ROSENTHAL

The then-head of the DEA, Asa Hutchinson, flew in to San Francisco to personally announce the arrest of best-selling author Ed Rosenthal, the man millions of readers knew as "Ask Ed", the grow-your-own advice columnist for High Times magazine.

As Hutchinson announced the arrest during a speech at the Commonwealth Club, the city's district attorney, Terence Hallinan, was outside with a bullhorn leading the protest against the federal raids on Rosenthal, a San Francisco dispensary, and the dispensary's manager.

Rosenthal had been deputized an officer of the City of Oakland for the purpose of growing cannabis for patients, and everything was done in cooperation with local law enforcement and city officials, but the jury was kept in the dark. Under federal law, why he was growing the plants, or for whom, was considered irrelevant as evidence.

As soon as the trial ended, the jurors heard the whole truth, and within 24 hours nine of them had publicly recanted their verdict, igniting another flurry of media stories. They wrote a letter in support of Rosenthal to the judge and sat with his family at sentencing. Though he was facing a mandatory 5 years in federal prison and the prosecution was seeking 6-1/2 years, the judge ruled that Rosenthal had reasonably relied on city officials who had tried to provide immunity under federal law. Rosenthal was sentenced to a single day in jail, with credit for time served.

The defense appealed the conviction, and prosecutors appealed the sentence. The conviction was overturned for juror misconduct, and Rosenthal was retried. The U.S. Attorney attempted to pile on 11 additional felony charges in addition to the original three, but all additional charges were dismissed as vindictive prosecution. Rosenthal was retried in 2007, becoming the first federal defendant to be tried again after already serving his sentence. He was convicted a second time.



CHERYL MILLER

Cheryl Miller was diagnosed with chronic, progressive Multiple Sclerosis (MS) in 1971. She tried all the medications that were prescribed for her, but many had such harmful side effects and were so toxic to her liver that she had to stop using them. Eventually she and her husband Jim heard that cannabis might help ease some of her symptoms, and they decided she should give it a try. They were amazed how Cheryl's normally stiff-as-a-board body became relaxed and pliant.

Soon after discovering the helpful properties of cannabis, the Millers became tireless activists in support of the legalization of cannabis for medical use. Beginning in 1993, after failed attempts to get lawmakers' attention to address this matter through lobbying, they found that protesting had more of an impact. Jim pushed Cheryl's wheelchair 58 miles across their state of New Jersey, and the media began to pay attention. In 1997, even though she had been homebound by her condition for over 10 years, she and her husband participated in that year's Boston-to-Washington "Wheelchair Crusade" for medical cannabis.

As Cheryl's MS progressed, they took their activism to the next level, committing public acts of civil disobedience at the Capitol that led to their arrest, though charges were dropped.

Cheryl Miller died June 7, 2003 from pneumonia and other MS-related complications. She was 57 years old. As a tribute to Cheryl and her advocacy, her friends and supporters created the Cheryl Miller Memorial Project to continue her legacy.

delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD) finds "a trend of reduced spasticity in treated patients" and "evidence that combined THC and CBD extracts may provide therapeutic benefit for MS spasticity symptoms."¹²⁷

One such dosage-controlled THC-CBD extract, GW Pharmaceuticals' Sativex®, has been shown in numerous clinical trials to ease pain and improve spasm frequency, bladder control, and sleep. Clinical trials of Sativex found that it "demonstrated a statistically significant and clinically relevant improvement in spasticity and was well tolerated in MS patients."¹²⁸ Sativex has been approved in Canada, Spain, New Zealand, and Great Britain for the symptomatic relief of spasticity, neuropathic pain or both in adults with Multiple Sclerosis.¹²⁹

MS patients frequently report cannabis helps with bladder control, and a review of studies on cannabinoid receptors in the bladder notes that non-psychoactive cannabinoids are also effective, and psychotropic effects of THC can be mitigated by delivering cannabinoids directly into the bladder.¹³⁰

Research on the distribution of cannabinoid receptors in the brain suggests that they may play a role in movement control. Only recently have scientists found an animal model for MS, called experimental allergic encephalomyelitis (EAE), allowing testing for symptom suppression. Recent pre-clinical reports found that cannabinoids lessened both tremor and spasticity in mice suffering from EAE.¹³¹ Moreover, cannabinoids have demonstrated effects on immune function that also have the potential for reducing the autoimmune attack that is thought to be the underlying pathogenic process in MS.

In addition to studying the potential role of cannabis and its derivatives in the treatment of MS-related symptoms, scientists are exploring the potential of cannabinoids to inhibit neurodegeneration. A 2003 study that the National MS Society called "interesting and potentially exciting" demonstrated that cannabinoids were able to slow the disease

process in mice by offering neuroprotection against EAE.¹³²

OTHER MOVEMENT DISORDERS

Muscular spasticity is a common condition, affecting millions of people in the United States. It afflicts individuals who have suffered strokes, as well as those with multiple sclerosis, cerebral palsy, paraplegia, quadriplegia, and spinal cord injuries. Conventional medical therapy offers little relief for spasticity. Phenobarbital and diazepam (Valium) are commonly prescribed, but they rarely provide complete relief, and many patients develop a tolerance, become addicted, or complain of heavy sedation. These drugs also cause weakness, drowsiness and other side-effects that people find intolerable.

The therapeutic use of cannabis for treating muscle problems and movement disorders has been known to western medicine for nearly two centuries. In 1839, Dr. William B.

O'Shaughnessy noted the plant's muscle relaxant and anti-convulsant properties, writing that doctors had "gained an anti-convulsive remedy of the greatest value."¹³³

Contemporary animal and human clinical studies reveal that cannabis and its constituent cannabinoids may effectively treat movement disorders affecting older patients, such as tremors and spasticity, because cannabis has antispasticity, analgesic, antitremor, and antiataxia actions.¹³⁴⁻¹⁴⁶

As noted previously, the contemporary understanding of the actions of cannabis was spurred by the discovery of an endogenous cannabinoid system in the human body. This system appears to be intricately involved in normal physiology, specifically in the control of movement.¹⁴⁷⁻¹⁵¹ Central cannabinoid receptors are densely located in the basal ganglia, the area of the brain that regulates body

movement. Endogenous cannabinoids also appear to play a role in the manipulation of other transmitter systems within the basal ganglia-increasing transmission of certain chemicals, inhibiting the release of others, and affecting how still others are absorbed. Most movement disorders are caused by a dysfunction of the chemical loops in this part of the brain. Research suggests that an endogenous cannabinoid tone participates in the control of movements.¹⁵¹⁻¹⁵³

Endocannabinoids have paradoxical effects on the mammalian nervous system: Sometimes they block neuronal excitability and other times they augment it. As scientists are developing a better understanding of the physiological role of those

natural cannabinoids, or endocannabinoids, it is becoming clear that these chemicals may be involved in the pathology of several neurological diseases. Researchers are identifying an array of potential therapeutic targets within the human nervous system.

They have determined that various cannabinoids found in the cannabis plant interrupt the synthesis, uptake or metabolism of the endocannabinoids that drive the progression of Huntington's disease, Parkinson's disease, and tremor.¹⁵⁴

Cannabis also has enormous potential for protecting the brain and central nervous system from the damage that creates various movement disorders. Researchers have found that cannabinoids fight the effects of strokes, as well as brain trauma, spinal cord injury, and multiple sclerosis. More than 100 research articles have been published on how cannabinoids act as neuroprotective agents to slow the progression of such neurodegenerative diseases as Huntington's, Alzheimer's and particularly Parkinson's, which affects more than 52% of people over the age of 85.¹⁵⁵⁻¹⁵⁸

AMERICAN NURSES ASSOCIATION

In 2003 the American Nurses Association passed a resolution that supports those health care providers who recommend medicinal use, recognizes "the right of patients to have safe access to therapeutic marijuana/cannabis," and calls for more research and education, as well as a rescheduling of marijuana for medical use.



VALERIE & MIKE CORRAL

In 1973, Valerie Corral was involved in a freak accident that changed her life. A P-51 Mustang, a converted W.W.II fighter plane, "buzzed" her car. The resulting accident left her with a head injury and a friend badly injured. Valerie's injury precipitated an epileptic condition with as many as five grand mal seizures a day.

Valerie tried using prescription drugs to control her seizures, but the side effects were devastating. But she found she could control the seizures using cannabis alone. For years, the couple grew their own

cannabis and began distributing it to terminally ill patients.

Five times over the years they were visited by local law enforcement officers. During each visit, they explained her medical cannabis use. The sixth time, they were arrested. At trial, Valerie became the first to successfully argue a medical necessity defense in California. The district attorney told the sheriff that he would not press charges if they were re-arrested. The next spring, they planted again; and a few months later they were raided and arrested. The community rallied around the Corrals, and the citizens of Santa Cruz County voted in a measure calling for the non-prosecution of medical cannabis patients.

Along with the other members of their collective, the Wo/Men's Alliance for Medical Marijuana (WAMM), Valerie and Mike continued research on different strains

of cannabis and provided medicine to approximately 250 members, 85% of whom are terminally ill.

Then on September 5, 2002, dozens of heavily armed DEA agents stormed the Corral's home and held guns to their heads. A paraplegic WAMM member who was staying with them at the time was handcuffed to her bed and abandoned.

Less than two weeks later, the Mayor and City Council of Santa Cruz joined WAMM to distribute medical cannabis to thirteen patients at Santa Cruz City Hall. Before 200 members of the media, 1,300 people gathered in solidarity.

This crisis prompted the City and County of Santa Cruz to join with WAMM in suing the federal government over the raids. Remarkably, they won a preliminary injunction protecting them from any future raids or arrests.

ARTHRITIS

According to the Arthritis Foundation arthritis is one of the most prevalent chronic health problems and the nation's leading cause of disability among Americans over age 15. A 2006 report estimated that 46 million Americans—nearly 1 in 5 adults—live with chronic joint pain and arthritis.

The use of cannabis as a treatment for musculo-skeletal pain in western medicine dates to the 1700s.¹⁵⁹ New evidence suggests that cannabis and related therapies can relieve the pain associated with arthritis and the other rheumatic and degenerative hip, joint and connective tissue disorders. Not only is cannabis an effective pain reliever, as noted above, it may also enhance the efficacy of opiate-based painkillers. In their 1999 meta-analysis of the data available, the IOM specifically noted that cannabinoids may also have

anti-inflammatory properties which could prevent and reduce pain caused by swelling (such as arthritis).¹⁶⁰

Twenty years ago research suggested that cannabis and its constituents were powerful immune-modulation and anti-inflammatory properties indicating it may treat chronic inflammatory diseases directly.¹⁶¹⁻¹⁶⁴ Since then, cannabis has proven an effective treatment for rheumatoid arthritis, and it is one of the recognized conditions for which many states permit medical use. Specifically, cannabis has a demonstrated ability to improve mobility and reduce morning stiffness and inflammation, and research suggests that individuals can reduce their use of potentially harmful Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) when using cannabis as an adjunct therapy.¹⁶⁵⁻¹⁶⁶

A growing compendium of research suggests that safe and effective treatment for arthritis

may be developed from cannabis. One of the non-psychoactive components of cannabis, cannabidiol (CBD), has also been shown to have numerous medical applications as an anti-inflammatory and neuroprotective agent and as a treatment for rheumatoid arthritis.¹⁶⁷⁻

¹⁷⁰ CBD research also indicates that the cannabinoid suppresses the immune response in mice and rats that is responsible for a disease resembling arthritis, protecting them from severe damage to their joints, and markedly improving their condition.¹⁷¹⁻¹⁷²

ALZHEIMER'S DISEASE

Alzheimer's disease is a neuro-degenerative condition for which cannabis and cannabinoid therapies show promise, both for treating the symptoms and the underlying disease.

Agitation is the most common behavioral management problem in people with Alzheimer's and affects an estimated 75 percent of people with the disease. It may lead to a variety of symptoms ranging from physical and/or verbal abusive postures, physically non-aggressive conduct including pacing and restlessness, as well as verbally disturbed behaviors such as screaming and repetitive requests for attention. Clinical research involving THC indicates that the cannabinoid reduced the agitation common to Alzheimer's sufferers. THC is also proven effective in combating anorexia or wasting syndrome, a common problem for people with Alzheimer's disease.¹⁷³⁻¹⁷⁵

Alzheimer's disease is widely held to be associated with oxidative stress due, in part, to the membrane action of beta-amyloid peptide aggregates. Studies have indicated that one of the cannabis plant's primary components, cannabidiol (CBD), exerts a combination of neuroprotective, anti-oxidative and anti-apoptotic effects by inhibiting the release of the toxic beta-amyloid peptide.¹⁷⁶⁻¹⁷⁷

This new research coupled with the extensive work done on other neuroprotective qualities of cannabis and its components indicates that cannabis or cannabis-based therapy may

become the source of the most effective treatments for battling the Central Nervous System diseases that afflict millions of elderly Americans.¹⁷⁸⁻¹⁸¹

IS CANNABIS SAFE?

Cannabis and its active psychoactive cannabinoid, THC, have an excellent safety profile. The Drug Awareness Warning Network Annual Report, published by the Substance Abuse and Mental Health Services Administration (SAMHSA), contains a statistical compilation of all drug deaths which occur in the United States. According to this report, there has never been a death recorded from the use of cannabis by natural causes. Pharmacology expert and author Dr. Iverson explains:

Laboratory animals (rats, mice, dogs and monkeys) can tolerate doses of up to 1000mg/kg. This would be equivalent to a 70-kg person swallowing 70g of the drug—about 5,000 times more than is required to produce a high. Despite widespread illicit use of cannabis, there are very few if any instances of people dying from an overdose.¹⁸²

DEA Chief Administrative Law Judge, Francis Young, in response to a petition to reschedule cannabis under federal law concluded in 1988 that, "In strict medical terms marijuana is far safer than many foods we commonly consume...Marijuana in its natural form is one of the safest therapeutically active substances known to man. By any measure of rational analysis marijuana can be safely used within the supervised routine of medical care."¹⁸³

More than a decade later, IOM investigators considered the physiological risks of using cannabis and concluded that "Marijuana is not a completely benign substance. It is a powerful drug with a variety of effects. However, except for the harms associated with smoking, the adverse effects of marijuana use are within the range of effects tolerated for other medications."¹⁸⁴

Toxicity, Risk of Overdose

Cannabis has a very high lethal dose, estimated at LD50 (about 1500 lbs smoked in approximately 15 minutes).¹⁸⁵ Therefore it is comparatively difficult to die from an overdose of natural cannabis. Dr. Lester Grinspoon, a professor emeritus at Harvard Medical School and author of several books on the medical use of cannabis, had this to say in an article in the Journal of the American Medical Association (1995):

"One of marihuana's greatest advantages as a medicine is its remarkable safety. It has little effect on major physiological functions. There is no known case of a lethal overdose; on the basis of animal models, the ratio of lethal to effective dose is estimated as 40,000 to 1. By comparison, the ratio is between 3 and 50 to 1 for secobarbital and between 4 and 10 to 1 for ethanol. Marihuana is also far less addictive and far less subject to abuse than many drugs now used as muscle relaxants, hypnotics, and analgesics. The chief legitimate concern is the effect of smoking on the lungs. Cannabis smoke carries even more tars and other particulate matter than tobacco smoke. But the amount smoked is much less, especially in medical use, and once marihuana is an openly recognized medicine, solutions may be found; ultimately a technology for the inhalation of cannabinoid vapors could be developed."¹⁸⁶

Dr. Grinspoon concludes, "the greatest danger in medical use of marihuana is its illegality, which imposes much anxiety and expense on suffering people, forces them to bargain with illicit drug dealers, and exposes them to the threat of criminal prosecution."

However, cannabis should not be considered a harmless substance. Cannabis has a number of physiological effects that in limited cases could be hazardous, but most adverse effects are within the range tolerated for most FDA-approved medications.¹⁸⁷

The Acute Effects of Cannabis

The acute, or short-term, effects of cannabis may begin when the drug is first ingested, and can last between one and three hours. Individual response varies, depending upon whether cannabis is ingested or inhaled, and many of the effects will decrease with prolonged use. Short-term adverse effects from using herbal cannabis may include: coughing or wheezing if cannabis is inhaled, euphoria, dry mouth, reddening of the eyes, increased appetite, blurred vision, dizziness, headache, delayed reactions, sedation, and anxiety. In most cases, effects are mild and can be controlled with careful titration.

In rare cases, usually as a result of taking large doses of cannabis in food or drink, individuals may experience acute complications such as panic attacks, psychosis, or convulsions. Referred to in medical literature as marijuana psychosis, it can be severe enough to compel admission to an emergency hospital.¹⁸⁸

Effects of Prolonged Use of Cannabis

Cannabis is a psychoactive drug and legitimate concerns have been raised about the effects of prolonged use. Although cannabis remains a tightly controlled substance, even for medical purposes, the FDA has approved synthetic derivatives of cannabis' psychoactive cannabinoid, THC.

In considering the consequences of cannabis use, the Institute of Medicine concluded that these concerns fall into two categories: the effects of chronic smoking of cannabis and the effects of THC. What follows is a brief review of some of the more serious concerns often attributed to smoking cannabis and its psychoactive cannabinoid, THC.

Hazards of Smoking Cannabis

Smoking cannabis raises concerns and research has suggested that because cannabis shares many of the same dangerous compounds found in tobacco that smoking cannabis can lead to increased risk of lung cancer and other chronic respiratory disease. However, the body of research is controversial because it is not conclusive.

Population studies have found mild lung function changes in heavy cannabis smokers¹⁸⁹ and long-term heavy use may present symptoms of bronchitis, including wheezing, production of phlegm and chronic cough.¹⁹⁰ More study is required to determine any causal relationship between smoked cannabis and the development of respiratory infections, it is therefore recommended that medical users of cannabis be cautious of heavy use, especially in concurrence with tobacco smoking.

While research has historically suggested that heavy cannabis smokers are at higher risk of contracting cancer, new research casts doubt on these claims.¹⁹¹ Research on this matter is often complicated by the fact that many cannabis smokers are also tobacco smokers and it is often difficult to differentiate the true cause. Studies at the cellular and molecular level have also suggested that smoked cannabis may cause cancer, however, new evidence indicates that cannabinoids themselves may decrease the cancer causing effect of the carcinogens and particles typically inhaled from smoking cannabis and therefore make cannabis smoke inherently less dangerous than tobacco smoke.¹⁹²

In 2006, the results of a five year case-controlled investigation and the largest study of its kind unexpectedly concluded that smoking cannabis, even regularly and heavily, does not lead to lung cancer or other types of head, neck or throat cancers. Lead investigator Dr. Donald Tashkin of the David Geffen School of Medicine, Division of Pulmonary and Critical Care Medicine, at the University of California-Los Angeles, further concluded that cannabis may contain key components that kill aging cells and keep them from becoming cancerous.¹⁹³ Dr. Tashkin's findings reaffirm the results of prior case-control studies dismissing a causal link between cannabis use and certain types of lung and upper aerodigestive tract (UAT) cancers.¹⁹⁴⁻¹⁹⁶

No data exists suggesting that orally ingested cannabis, like in food or drink, may cause can-



ANGEL MCCLARY RAICH

On December 16, 2003, Angel McClary Raich became the first medical marijuana patient to successfully sue the federal government. Joined by another patient, Diane Monson, and the two anonymous caregivers who provide Angel the marijuana that sustains her life, she sued Attorney General John Ashcroft and the DEA, seeking an injunction against any future arrests or prosecutions.

The Ninth Circuit Court of Appeals in San Francisco ruled that it was unconstitutional to apply the federal ban on marijuana to patients, so long as they use it for medical purposes on their doctors' advice, obtain the drug without buying it, get it within their state's borders, and comply with state law. The U.S. Supreme Court overturned the ruling in a 6-3 decision, with a scathing dissent defending the rights of patients.

Angel has been permanently disabled since September 1995. In late 1997, Angel's doctor recommended cannabis as a possible medication to treat her complex medical conditions. Confined to a wheelchair from January 1996 to August 1999, Angel regained her mobility with the help of cannabis.

Angel also suffers from several conditions that cause severe, chronic pain, including fibromyalgia, endometriosis, scoliosis, uterine fibroid tumors and rotator cuff syndrome. She is battling a brain tumor, seizures, and life-threatening wasting syndrome accompanied by near-constant nausea.

These interlocking medical problems have been a huge challenge for her doctors. Complicating her treatment has been the fact that she has severe chemical sensitivities and is allergic to almost all of the drugs that are modern medicine's defense against most of her illnesses. Even the federal government does not dispute that cannabis is essential to her health, but it nonetheless insists she is a criminal who can be arrested and imprisoned at will.



MYRON MOWER

Myron Mower was ill in the hospital from complications of his diabetes, when sheriff's deputies searched his home and found 31 cannabis plants. The sheriff had adopted a policy that no patient could grow than three plants, so they uprooted all but three. Later that day, a deputy questioned Mower in the hospital while he was under the influence of morphine. Weeks later, Mower was arrested and charged with felony cultivation.

During his trial, the prosecutor even acknowledged, "if there is a person in the state of California for whom Prop. 215 was enacted, it is Myron Mower." But, he urged the jury to convict anyway, based solely on the number of plants. An expert testified the garden was appropriate for Mower's need, but the jury took only 90 minutes to convict.

Mower appealed. In 2002, the California Supreme Court ruled patients should be protected from unnecessary prosecution for growing and possessing marijuana. The court ruled that Prop. 215 provides qualified immunity from prosecution, and shifted the burden of proof to the prosecution.

That landmark decision changed the legal landscape in California, extending patient protections.

The charges against Mower were dropped.

cer. If smoke inhalation is a concern, cannabis can be used with a vaporizer, orally in baked goods and other food product, topically in oils and lotions, in oral sprays like a tincture, or in a suppository.

Effects on Cognition

Cannabis use appears to impair cognition involving short-term memory, performance, attention and concentration among long-term heavy smokers.¹⁹⁷ Most studies suggest that chronic users of cannabis suffer varying degrees of cognitive impairment that can sometimes be long lasting. Studies have also shown that these deficits in attention and memory occur more often with heavy cannabis use, and that these deficits can extend beyond the period of intoxication.¹⁹⁸ These effects can also be cumulative with longer periods of use, but are to some degree reversible after a period post-cessation of use.

A recent meta-analysis of the long-term effects of cannabis use "failed to demonstrate a substantial, systematic, and detrimental effect of cannabis use on neuropsychological performance. It was surprising to find such few and small effects given that most of the potential biases inherent in our analyses actually increased the likelihood of finding a cannabis effect."¹⁹⁹

Effects on psychomotor performance

The most common types of psychomotor functions impaired by cannabis use include body sway, hand steadiness, rotary pursuit, driving and flying simulation, divided attention, sustained attention, and the digit-symbol substitution test.²⁰⁰ The effects are generally short-lived and do not appear to be affected over the long-term. Individuals are affected differently by prolonged use of cannabis: it is still controversial whether or not tolerance to psychomotor effects increases with chronic use. Research clearly indicates that cannabis exposure impairs psychomotor performance and people should be warned not to drive or operate dangerous machinery, especially if they feel intoxicated after smoking cannabis.²⁰¹

Effects on the immune system

The effects of cannabis smoking on the immune system are inconclusive. The IOM notes that the relationship between cannabis

and the immune system presents interesting issues, including potential benefit and suspected harm.²⁰²

The discovery of the CB-2 receptor, located primarily in the various cell types of the immune system has renewed interest in the interaction of cannabinoids and immune function. As a result, several pharmaceutical have expressed interest in developing CB-2-selective drugs which might have utility as immunosuppressants or in the treatment of arthritis, multiple sclerosis and other serious illness thought to be related to immune system response.²⁰³

In 2001, there were some studies that suggested people living with AIDS experienced increased mortality and opportunistic bacterial and fungal infections associated with contaminated cannabis material.²⁰⁴ However, it is unclear if the increase in infections is a result of suppression of the immune system by cannabis or because the individuals are exposed to more potential pathogens from smoking cannabis.²⁰⁵

In 2003, concerns that cannabis-induced immune suppression may adversely effect people living with HIV/AIDS were addressed in a randomized, placebo-controlled clinical trial which concluded that concurrent administration of smoked or oral cannabis did not effect HIV RNA levels, CD4+ and CD8+ cell counts or protease inhibitor levels over a 21-day treatment.²⁰⁶ In another randomized, placebo-controlled study the administration of oral THC or smoked cannabis did not significantly alter pharmacokinetic properties of the protease inhibitors tested and had no effect on anti-retroviral efficacy.²⁰⁷

Although people with weakened immune system, like those with HIV/AIDS, might be expected to have increased risk, there is no evidence that the long-term recreational or medical use of cannabis renders users more susceptible to bacterial or viral infection.²⁰⁸

CANNABIS-BASED MEDICINES: THE 'PHARMACEUTICALIZATION' OF CANNABIS

Dr. Lester Grinspoon has defined the "pharmaceuticalization of cannabis" as the prescription of isolated individual cannabinoids, synthetic cannabinoids, and cannabinoid analogs. In what Dr. Grinspoon describes as the federal government's desire to introduce a cannabis-like pill to replace natural cannabis use, the first efforts to "pharmaceuticalize" cannabis occurred in 1985 when dronabinol (Marinol) was approved by the FDA.²⁰⁹

Dronabinol (Marinol)

Dronabinol (Marinol) is a synthetic preparation of THC encapsulated in sesame oil. Designed and marketed by Solvay Pharmaceuticals and its subsidiary Unimed, Marinol was first indicated for treatment of nausea and vomiting associated with cancer chemotherapy in people who failed to respond adequately to conventional antiemetic treatments and later available for the treatment of anorexia associated with weight loss for people living with HIV/AIDS.

When first approved for medical use, dronabinol was placed in Schedule II according to the Controlled Substances Act where it was tightly controlled. In 1999, in response to a rescheduling request by Unimed, it was moved by administrative rule to Schedule III to make it more widely available. Currently Marinol is available in three dosage strengths: 2.5, 5, and 10mg to ensure optimal response by the broadest number of people. Despite the well-documented therapeutic value of THC, dronabinol has been met with moderate success.

It is widely acknowledged that Marinol's oral route of administration hampers its effectiveness because of slow absorption and patients' desire for more control over dosing. In their review of Marinol the Institute of Medicine specifically noted that only about 10-20% of an oral dose is absorbed by the human body and onset of action is obtained between two and four hours after dosing.²¹⁰

Nabilone (Cesamet)

Nabilone (Cesamet) is a synthetic derivative of THC with and has slightly modified molecular structure from dronabinol. Currently available for medical use in Canada, United Kingdom, and Mexico, it was approved by the FDA in 1985 for treatment of chemotherapy-induced nausea and vomiting that has not responded to conventional medication. Although nabilone was approved more than twenty years ago, it began marketing in the United States as Cesamet in 2006 and used for treatment of anorexia and weight loss in people with HIV/AIDS and as an adjunct therapy for chronic pain management.

Cannabis-Extract (Sativex)

THC is the most familiar cannabinoid, and its therapeutic effects have been well established. However, cannabis contains about sixty other cannabinoids, like CBD, which not only offset the psychoactive effect of THC, but may contain therapeutic benefits of their own. In fact, research suggests that the therapeutic affect of cannabis might be linked to what researchers call an "entourage effect," the synergistic relationship between multiple cannabinoids which may make them more therapeutically beneficial in combination than they are individually.

Building on this theory, researches affiliated with GW Pharmaceuticals (GW Pharma) have noted that in practice medicines or extracts derived from the cannabis plant provide greater relief of pain than the equivalent amount of synthetic cannabinoid given as a single chemical entity like dronabinol. Licensed in the UK, and founded in 1998, GW Pharma is a pharmaceutical company committed to developing a portfolio of cannabinoid and botanical medicines to meet the needs of patients around the world.

Sativex is GW Pharma's lead cannabinoid product, and in 2005 became the world's first pharmaceutical prescription medicine derived from extracts of the cannabis plant. Specifically, Sativex is a cannabis extract containing equal amounts of dronabinol (THC)

and cannabidiol (CBD), which is administered as an oral spray absorbed in the patient's mouth.

Sativex has been approved for medical use in Canada for symptomatic relief of neuropathic pain in Multiple Sclerosis and as adjunctive analgesic treatment in people with advanced cancer who experience moderate to severe pain during the highest tolerated dose of strong opioid therapy for persistent background pain. GW Pharma is currently undergoing late stage clinical development of Sativex in Europe and the United States. Upon approval in the United States, Sativex will be marketed by Otsuka Pharmaceuticals.

According to Dr. Grinspoon's theory, the "pharmaceuticalization" of cannabis will only succeed if the pharmaceutical derivatives and extracts displace cannabis as medicine. Although a few individuals will prefer dose consistent pharmaceutical alternatives it seems unlikely that these drugs will completely replace the use of cannabis especially given its limited toxicity, easy availability, low cost relative to pharmaceuticals, ease with which it can be self-titrated, growing access to vaporization devices, and its remarkable medical versatility.²¹¹

INVESTIGATIVE ROADBLOCKS: THE U.S. RESEARCH EXPERIENCE

In the past three decades there has been an explosion of international research to investigate the therapeutic value of cannabis. Restrictions on cannabis research in the U.S. have resulted in very few clinical trials conducted domestically. Meanwhile, research teams in Great Britain, Spain, Italy, Israel, and elsewhere have confirmed—through case studies, basic research, pre-clinical and clinical investigations—the medical value of cannabis. Equally important, numerous studies have provided strong indications of the potential for more targeted drugs, whole-plant cannabis derivatives and synthetics. The current research challenge is to conduct human clinical trials that apply the remarkable range of potential applications for cannabis-based treatments

applied to specific medical conditions.

That challenge was identified in Marijuana and Medicine, however there has been no additional effort to review or fully implement the IOM's recommendations. Moreover, the unfortunate result of the federal prohibition of cannabis is limited clinical research to investigate the safety and efficacy of cannabis to control symptoms of serious and chronic illness. In the United States research is stalled, and in some cases blocked, by a complicated federal approval process and restricted access to research grade cannabis for research.

The Failure of a Federal Monopoly

The only way for cannabis to be evaluated by the FDA to determine whether it meets the standards necessary to become a medicine under federal law is for privately-funded sponsors to conduct clinical trials.

Despite the fact that federal law clearly requires adequate competition in the manufacture of Schedule I and II substances, since 1968 the National Institute on Drug Abuse (NIDA) has been the sole supplier of cannabis used for legitimate research purposes. DEA helps to protect NIDA's monopoly by refusing to grant competitive licenses for cannabis production.

NIDA's mission is to support research on the causes, consequences, prevention and treatment of drug abuse and drug addiction and officials from the Institute have testified that it is not NIDA's mission to study medicinal uses of cannabis or to advocate for such research.²¹² Consequently, research which aims to investigate or prove the therapeutic value of cannabis is often obstructed or otherwise altered to accommodate suggestions by NIDA in order to satisfy the limitations of their mission.

DEA obstructs research by protecting an unnecessary federal monopoly on the supply of cannabis available for FDA-approved research. As a result, some medical cannabis researchers (who possess the appropriate licenses and requisite approval) have been unable to conduct their research because



BRYAN EPIS

Bryan Epis discovered the medical value of marijuana when he tried using it to treat the chronic back and neck pain that resulted from fracturing two vertebrae in a near-fatal car accident. When California made medical cannabis legal, Epis saw an opportunity to serve others by starting a medical cannabis collective that would be safe, accessible and affordable.

Chico Medical Marijuana Caregivers had approximately 40 patients, all carefully screened, and Epis personally provided money for five indigent patients to see physicians. He was in the process of starting another collective in San Jose, California when the federal government arrested him.

Because he had allowed four other physician-approved patients to grow at his house, Epis was charged with, and ultimately convicted of, conspiracy to manufacture more than 1000 plants. They were growing far less, but prosecutors convinced the jury he had plans to grow more, and Epis received a 10-year federal prison sentence.

At his trial, the judge refused to allow any mention of California's medical marijuana law or that the cannabis was for medical purposes. The jury was instructed, like all federal juries in states with medical marijuana laws, to disregard any references to the medical circumstances that slipped into witness testimony.

Afterward, members of the jury said they had no idea that such a stiff sentence might be imposed, and would have voted differently had they known. Epis is currently serving the remainder of his sentence.

NIDA has refused to provide the cannabis.²¹³

For seven years, Professor Lyle Craker, UMass-Amherst, has been struggling to obtain a DEA license for a privately-funded facility to grow

cannabis exclusively for FDA-approved studies designed to evaluate cannabis's potential medical value.

In February 2007, after a lengthy hearing that included two weeks of testimony from 12 witnesses, U.S. Department of Justice-appointed Administrative Law Judge Mary Ellen Bittner issued an 87-page opinion, findings of fact, and recommended ruling urging the end of the federal monopoly on the supply of cannabis that can be used in FDA-approved research. In her opinion, Judge Bittner suggests that "respondent's registration to cultivate marijuana would be in the public interest" and recommended that DEA grant Professor Lyle Craker the license.²¹⁴

Unfortunately, DEA is under no obligation to accept Judge Bittner's administrative ruling.

When it became apparent that the DEA was resisting acting on the ruling, as it did in the case of the 1988 ruling on rescheduling, 45 Members of Congress wrote to DEA Administrator Karen Tandy in support of Judge Bittner's decision, urging her to approve the application. The DEA has yet to issue a license for the production of research cannabis. Nearly two years have passed since Judge Bittner issued her ruling, and DEA has yet to provide any response or take any action on the recommendation.

Arbitrary and Lengthy Delays

Despite the fact that it is not NIDA's mission to study the potential therapeutic value of cannabis or to advocate for such research, the monopoly on the supply of cannabis available for research results in arbitrary and lengthy delays. Ordinarily, once a protocol has been approved by the FDA, researchers obtain their research material and proceed with the approved course of study.

In one extraordinary example of interference, not only did NIDA refuse to accept FDA's approved protocol, but the agency took nine months to provide an initial response and made no attempt at discussing the study or their concerns before denying the request for

cannabis.

In 1994, Dr. Donald Abrams, a longtime clinical faculty member at the University of California San Francisco, submitted a pilot study protocol designed to evaluate high, medium and low potency smoked cannabis or dronabinol in stimulating appetite and reducing weight loss associated with HIV-related wasting syndrome. Following approval by the FDA, Dr. Abrams submitted an application to NIDA for cannabis to be used in the study.

Nine months later, NIDA rejected the application for cannabis, despite the fact the FDA had already approved the protocol.²¹⁵ In June 1995, NIDA announced a new policy that required all medical cannabis protocols to be submitted to the National Institutes of Health (NIH) for peer review in the context of a grant application. One year later, Dr. Abrams resubmitted a revised protocol to evaluate the safety and efficacy of smoked cannabis as an appetite stimulant for HIV-associated anorexia and weight loss, and, in August 1996, NIH rejected the protocol.²¹⁶

The research protocol would be submitted a couple more times before, under intense scrutiny, NIDA awarded Dr. Abrams a grant for his protocol. The results of his two-year clinical determined that using cannabis did not compromise to the immune systems of people living with HIV/AIDS.

In another example, a DEA-licensed analytical lab, Chemic Labs, was made to wait more than two years for a reply to its initial request to purchase 10 grams of cannabis for a privately sponsored research protocol to investigate the safety of vaporizers, a non-smoking delivery system which the Institute of Medicine report recommended be developed. After two years of delay processing the request, the application was rejected. NIDA has also refused to provide cannabis to two other privately sponsored, FDA-approved protocols that sought to evaluate cannabis for AIDS wasting syndrome (IND #43-542) and another for an investigation of migraines (IND #58-177).

A Movement in Public Health

Despite barriers to research, a growing body of clinical data supports the use of cannabis for medical purposes. While there is still much to learn, the medical value of cannabis is indisputable. As a result, a growing number of public health organizations have endorsed policies the use of cannabis and programs that advance medical and scientific research.

In 1994, the Federation of American Scientists recommended that the President instruct the National Institutes of Health and the FDA to reopen investigation protocols to enroll seriously ill patients who physicians believed that cannabis could ease symptoms of a variety of diseases. The following year, the American Public Health Association passed a resolution which encourages vigorous research and "urges the Administration and Congress to move expeditiously to make cannabis available as a legal medicine."

In 1996, the American Academy of Family Physicians offered their support for medical cannabis for specific medical conditions so long as use was in accordance with medical supervision by a licensed professional. And, in 1997, two years prior to the publication of the Institute of Medicine's report, the New England Journal of Medicine editorialized the following:

A federal policy that prohibits physicians from alleviating suffering by prescribing marijuana to seriously ill patients is misguided, heavy-handed, and inhumane...It is also hypocritical to forbid physicians to prescribe marijuana while permitting them to prescribe morphine and meperidine to relieve extreme dyspnea and pain...there is no risk of death from smoking marijuana...

Citing the 1999 Institute of Medicine report and studies published since which indicate that the use of cannabis to alleviate the debilitating symptoms of cancer chemotherapy and wasting, the Lymphoma Foundation of America passed a resolution urging Congress



PETER MCWILLIAMS

Peter McWilliams was a best-selling writer and publisher of numerous self-help and other books. Having repeatedly pulled his life together after personal hardships, he wrote and published books to help others.

In March 1996, McWilliams was diagnosed with both AIDS and cancer. Prescribed chemotherapy and radiation to fight the cancer and combination drug therapy for the AIDS, he found that the treatment was almost worse than the disease. Nauseous, unable to eat, and without appetite, McWilliams began to waste away, despite the medications his doctors prescribed.

After some research, McWilliams discovered cannabis allowed him to keep down the drugs that were helping fight his diseases. He made a remarkable recovery and was once again his positive, vivacious, productive self.

Then, in 1996, California voters legalized medical cannabis. McWilliams became an outspoken advocate, and he commissioned Todd McCormick, an activist and patient, to write a book on cultivating different strains for different illnesses. McCormick began his research, but was soon raided by the DEA.

McWilliams, McCormick, and others were charged with conspiracy to cultivate marijuana. Since federal law does not recognize medical cannabis, the judge forced them to stop using medical cannabis as terms of their release while they awaited trial.

With no legal defense available under federal law and facing a mandatory 10-year sentence, McWilliams pled to a lesser charge that reduced his possible sentence to a maximum of five years.

But while awaiting sentencing he was still unable to use the cannabis that had proven effective in controlling his nausea where other drugs had not. Peter McWilliams died in his home on June 14, 2000 at the age of 50, asphyxiating on his own vomit.

and the President to enact legislation to reschedule cannabis to allow doctors to prescribe cannabis for their patients in accordance with need. The Leukemia & Lymphoma Society also "supports legislation to remove criminal and civil sanctions for the doctor-advised, medical use of marijuana by patients with serious physical medical conditions" and has encouraged "the federal government to authorize the Drug Enforcement Administration to license privately funded production facilities that meet all regulatory requirements to produce pharmaceutical-grade marijuana for use exclusively in federally approved research."

Following the lead of several state nurses organizations, the American Nurses Association passed a resolution in support of health care providers who recommend the use of cannabis and further acknowledged that "the right of patients to have safe access to therapeutic cannabis. The ANA specifically called for more research and urged the removal of cannabis from the list of Schedule I controlled substances.

Recently, the Assembly of the American Psychiatric Association unanimously approved a strongly worded statement championing legal protections for individuals using cannabis in accordance with a physician's recommendation. Representing 40,000 members and 16 allied organizations (including the American Academy of Psychiatry and the Law, American Academy of Child and Adolescent Psychiatry, American Association for Social Psychiatry, American Academy of Addiction Psychiatry, and the American Association of Emergency Psychiatrists) the American Psychiatric Association is the main professional organization for psychiatrists in the United States.

In 2008, the American College of Physicians (ACP) published a position paper underscoring the therapeutic value of cannabis and specifically recommends the federal govern-

ment consider "reclassification [of cannabis] into a more appropriate schedule, given the scientific evidence regarding marijuana's safety and efficacy in some clinical conditions." The ACP is the largest medical specialty organization and the second largest physician group in the United States. Its 124,000 members are doctors specializing in internal medicine and related subspecialties, including cardiology, neurology, pulmonary disease, oncology and infectious diseases. The College publishes the *Annals of Internal Medicine*, the most widely-cited medical specialty journal in the world.

Regarding the growing support by public health organization, former Surgeon General Dr. Jocelyn Elders observed that "large medical associations are by their nature slow and cautious creatures that move only when the evidence is overwhelming." She continued, "The evidence is indeed overwhelming that, as ACP put it, there is 'a clear discord' between what research tells us and what our laws say about medical marijuana."²¹⁷

The ACP position is reflected by the numerous professional health organizations which have endorsed the medical use of cannabis. They include the American Medical Association, American Public Health Association, the American Academy of Family Physicians, the American Nurses Association, the National Association of Boards of Pharmacy, the California Medical Association, the American Preventive Medical Association, the American Society of Addiction Medicine, the Iowa Board of Pharmacy, and many more.

The current acceptance of cannabis as medicine in the United States is further evidenced by the thousands of American doctors who have recommended its use to their patients, the tens of thousands of individuals who are using it safely and effectively, and millions of American voters and several state legislatures that have approved its legal use as medicine.

THE ROAD TO REFORM

THE STRUGGLE FOR SAFE ACCESS

At the time the Controlled Substances Act was being drafted in 1970, Assistant Secretary of Health Roger O. Egeberg recommended that cannabis temporarily be placed in Schedule I, the most restrictive category of drugs, pending the findings of the National Commission on Marihuana and Drug Abuse. Despite the Commission's recommendations to permit the medical and personal use of cannabis, President Nixon enacted the Comprehensive Drug Abuse Prevention and Control Act.²¹⁸

Title II of the act, formally known as the Controlled Substances Act, places drugs into one of five categories, or schedules. Cannabis was restricted to Schedule I, reserved for substances with no medical value and a high potential for abuse; all use of the substance is strictly prohibited. Examples of other Schedule I drugs include heroin and LSD.

Paradoxically, synthetic forms of THC, the most powerful psychoactive chemical component of cannabis, are classified as Schedule III. Schedule III is reserved for drugs that exhibit medical value and have a mild potential for abuse. Other Schedule III drugs include ketamine, buprenorphine, hydrocodone and codeine.

Cannabis may be reclassified in one of two ways; by an act of Congress or via administrative channels. The Drug Enforcement Administration could remove cannabis from the list of Schedule I drugs through the rule-making process in the same way they have handled dronabinol and other substances. However, the Controlled Substances Act also provides for a rulemaking process by which the general public could petition the United States Attorney General to reclassify cannabis in accordance with the relevant scientific data.

For 30 years, advocates have exhausted congressional, administrative and judicial chan-

nels seeking to remove cannabis from Schedule I. The following is a summary of milestones in the movement to secure safe access to cannabis for therapeutic use.

ADMINISTRATIVE APPEALS

Petition to Reschedule (1972-1994)

The first petition to reschedule cannabis was filed by the National Organization for the Reform of Marijuana Laws (NORML) in 1972. More than a decade later and following two years of administrative hearings which included testimony from more than 60 researchers, doctors, and their patients, the DEA's Chief Administrative Law Judge, Francis L. Young, ruled in 1988 that "Marijuana, in its natural form, is one of the safest therapeutically active substances known... It would be unreasonable, arbitrary and capricious for the DEA to continue to stand between those sufferers and the benefits of this substance..."²¹⁹

Although Judge Young recommended that cannabis be rescheduled, the DEA rejected the opinion and published their denial in the Federal Register on December 29, 1989.²²⁰ In 1991, Alliance for Cannabis Therapeutics (ACT), the first non-profit organization dedicated to reforming the laws which prohibit medical access to cannabis, petitioned the U.S. District Court of Appeals for the District of Columbia seeking review of the denial.²²¹ After further review, DEA issued a final order in 1992 underscoring the agency's opinion that cannabis has no accepted medical use.²²² In 1994, the D.C. Circuit Court of Appeals denied a second petition to reconsider the final order, effectively ending any further movement on the petition.

2nd Petition to Reschedule (1995-2001)

The second attempt began in 1995, when Jon Gettman, the former National Director for NORML, submitted a personal petition

requesting that cannabis and all related cannabinoids be removed from Schedules I and II of the CSA. The petition argued that cannabis did not meet the abuse potential required by statute. Jon Gettman, PhD, explains,

The first attempt to have marijuana rescheduled eventually became focused solely on whether marijuana had an accepted medical use in the United States. Unlike the first proceedings the 1995 rescheduling petition hinges on whether marijuana's abuse potential is significant enough to justify its current Schedule I status. In this respect the 1995 petition goes to the heart of the issue Hollister raised before Congress in 1970 -- whether scientific evidence will support the integrity of CSA scheduling of heroin, LSD and marijuana in the same schedules, and whether marijuana prohibition can be perpetuated given rapid social change in its use.²²³

In April, 2001, pursuant to the results of a review of scientific literature conducted by the Department of Health and Human Services (HHS) and their own review of relevant information, DEA denied the petition.²²⁴ An appeal of DEA's decision was filed with the District of Columbia circuit of the U.S. Court of Appeals, but in May 2002, the Court denied the appeal citing concerns that the petitioners did not have standing to subject DEA's denial of the petition to review by the federal courts because the petitioners were not injured parties.²²⁵

Current Petition to Reschedule Cannabis (2002-present)

The current petition to reschedule cannabis was filed in October 2002 by the Coalition for Rescheduling Cannabis (CRC). The CRC is an association of public-interest groups, individuals who use medical cannabis, and advocates who support removing cannabis from Schedule I.

The CRC petition is almost identical to the 1995 petition, but includes important devel-

opments. Notably, the current petition includes a compendium of research containing the Institute of Medicine's 1999 report and other research published between 1995 and 2002. Moreover, the current petition acknowledges the growing number of states permitting the use of cannabis in accordance with a physician's recommendation.

DEA formally accepted the petition for filing on April 3, 2003, and per the provisions of the CSA referred the petition to HHS in July 2004 for a full scientific and medical evaluation. This review is still pending.

Data Quality Act Petition (2004-2010)

The Data Quality Act (DQA) requires federal agencies to use reliable science when making regulations and disseminating information. Specifically, the DQA requires that the information circulated by federal agencies is fair, objective, and meets certain quality guidelines. It also permits citizens to challenge government information believed to be inaccurate or based on faulty, unreliable data. Business, consumer, environmental and conservation groups have all used the DQA to pursue changes in federal policy.

In 2004, Americans for Safe Access (ASA) filed a petition with the U.S. Department of Health and Human Services (HHS) to correct misinformation published in the Federal Register about the accepted medical value of cannabis. ASA's petition asserts that the information HHS provided in the Federal Register was inaccurate and did not consider all the scientific evidence available.

In 2005, HHS denied the petition, citing concerns that accepting the petition would set the preconditions for rescheduling cannabis and the agency was already engaged in a scientific review of the literature in response to the 2002 rescheduling petition. ASA filed an appeal, and in response to a letter of intent to sue from ASA, HHS denied the appeal. In 2007, pursuant to provisions of the Administrative Procedures Act, ASA filed suit in the U.S. District Court for the Northern

District of California. On December 29, 2010, the Ninth Circuit denied ASA's petition for rehearing, effectively bringing to a close ASA's six year struggle to force the Federal Government to acknowledge the truth about the accepted medical value of cannabis.

ADMINISTRATIVE ACTIONS

The Creation and Termination of the Compassionate Investigational New Drug Program (IND): (1978-1992)

Started in 1978 as part of a lawsuit settlement by the Department of Health and Human Services, the Compassionate IND program allowed registered patients to receive government supplied medical cannabis from the FDA. In response to a flood of applications from HIV/AIDS patients in the 1980s, the Secretary of Health and Human Services under George H.W. Bush closed the program in 1992. Today, only the six surviving approved patients still receive medical cannabis from the federal government.

DOJ Memo (2009)

On October 19, 2009, Deputy Attorney General David Ogden issued a memorandum to US Attorneys in states that have enacted laws allowing for the medical use of cannabis. Specifically, the memo discourages the use of federal enforcement resources to investigate individuals who are in "clear and unambiguous compliance with state law" regarding medical cannabis. The memo also notes that the commission of crimes not related to medical cannabis should not be ignored.

The memo's tacit recognition that cannabis has legitimate medical applications and that allowance should be made for patients whose physicians have advised them to use it marks a significant policy departure from previous administrations. Although the memo does not have the force of law, it did appear to ease the conflict between the federal law enforcement officials and state-authorized individuals who use or provide cannabis for therapeutic use. However, it was a false sense

of security, as federal raids on medical cannabis dispensaries and cultivation centers continue to this day.

Victory for Veterans (July, 2010)

Under the rules of the Department of Veterans, veterans can be denied pain medications if they are found to be using illegal drugs. Until July, 2010, the department had no written exception for medical marijuana. On July 22, 2010, veterans who had sought resolution between federal and state law for years were finally rewarded. The Department's current policy now formally allows patients treated at its hospitals and clinics to use medical cannabis in states where it is legal.

CONGRESSIONAL ACTIONS

In 1981, U.S. Representatives Stewart McKinney (R-CT) and Newt Gingrich (R-GA) co-sponsored the first of a succession of bills to provide for the therapeutic use of cannabis in situations involving serious illness and to provide adequate supplies of cannabis to individuals who qualify for such use. Specifically, the legislation required the Secretary of the Department of Health and Human Services to secure and maintain a supply of cannabis to meet the medical, research, scientific, and export needs of the United States. The bills were referred to committee and no further action was taken on these bills.

During the next decade, no legislation was introduced in Congress. However, in response to efforts in the various states to authorize the use of cannabis to treat serious and chronic illness, Congress introduced several pieces of legislation designed to undermine reformation in the states.

Undermining Reform: The 105th Congress (1998)

In 1996, voters in California and Arizona* became the first state to authorize the use of cannabis in accordance with a physician's recommendation. In 1998, Oregon, Alaska, and Washington State enacted similar laws. The

adoption of these laws fascinated national media prompting Congressional action. In fact, the first pieces of legislation introduced during the 105th Congress sought to penalize individuals participating in state reforms.²²⁶

During the fall of 1998, the U.S. House of Representatives debated and passed a resolution expressing the sense of Congress that "marijuana is a dangerous and addictive drug and should not be legalized for medicinal use."²²⁷ No action was taken by the U.S. Senate, but the language was incorporated into the FY1999 omnibus appropriations legislation.²²⁸

A separate amendment to the same legislation instructed that the District of Columbia could not spend appropriations money to administer a ballot initiative authorizing the use of cannabis for medical purposes. The amendment was successfully challenged, and 69% of voters in the nation's capital approved the measure. However, Congress has effectively used the appropriations process to bar the implementation of the D.C. ballot initiative.

Ending the Raids: The Hinchey-Rohrabacher Amendment (2003-2007)



Within weeks of the terrorist attacks on September 11, 2001, dozens of federal drug enforcement agents raided and closed the West Hollywood-based Los

Angeles Cannabis Resource Center (LACRC), a non-profit dispensing collective that provided cannabis to approximately 1,000 people living with AIDS, cancer, and other terminal illnesses. Despite the fact that the LACRC was legal under state law and operated with the full support of local elected officials and law-enforcement officers, federal agents seized cannabis plants, business documents, bank accounts, and about 3,000 confidential medical records. Since the raid, the Drug Enforcement Administration has continued to conduct paramilitary-style raids across the state of California.

In 2003, in an effort designed to put scarce law enforcement resources to better use, U.S.

Representatives Maurice Hinchey (D-NY) and Dana Rohrabacher (D-CA) introduced the first in a succession of bipartisan amendments to the Commerce, Justice, State appropriations bill to prohibit the Department of Justice from using appropriated funds to interfere with the implementation of medical cannabis laws in the states that have authorized such use. The amendment has been offered a handful of times, with marginal gains.

Fighting for Truth in Trials

The unfortunate result of the U.S. Supreme Court's decision in *Gonzales v. Raich* is that federal defendants who are authorized to use, possess and cultivate cannabis in accordance with state law are prohibited from presenting evidence in federal court related to their therapeutic use of cannabis or their compliance with local and state laws. Consequently, most individuals indicted on federal counts plead to lesser charges. In fact, since the Raich decision, at least two-dozen individuals have been convicted and sentenced to several years in prison, despite not breaking any local or state laws.²²⁹

In 2005, U.S. Representative Sam Farr (D-CA) introduced The Steve McWilliams Truth in Trials Act (H.R. 4272) to amend the Controlled Substances Act both to provide an affirmative defense



for the medical use of cannabis in accordance with the laws of the various states and to limit the authority of federal agents to seize cannabis authorized for use under state law. The bill originated in the 108th Congress and was reintroduced in the 111th Congress and every year since then through 2010. It was named in honor of a Californian who took his own life while awaiting sentencing for federal cannabis distribution charges. During his trial, jurors were not informed that he was providing medical cannabis to individuals with seriously illness as part of a small collective in San Diego.

The "Truth in Trials" Act enables individuals

facing federal prosecution for marijuana-related offenses to provide evidence during trial that the activities they were engaged in were performed in compliance with their state's duly-enacted medical marijuana laws. The "Truth in Trials" Act is not about the merits of medical cannabis. Instead, the bill would restore fundamental fairness in federal trials concerning the use or provision of marijuana solely for medical purposes and in accordance with state law.

Protecting States' Rights: The Medical Marijuana Patient Protection Act

During the 110th Congress, U.S. Representative Barney Frank (D-MA) and several co-sponsors introduced the "Medical Marijuana Patient Protection Act of 2008" (H.R. 5842). This legislation makes necessary changes to federal law to provide for the medical use of cannabis in



accordance with the laws of the various states. Specifically, H.R. 5842 would have reclassified cannabis from a Schedule I drug to a Schedule II drug, which would acknowledge the medical value of cannabis and create a regulatory framework for the FDA to begin a drug approval process for cannabis. The "Medical Marijuana Patient Protection Act" would have also prohibited federal agencies from interfering with the implementation of state-authorized medical cannabis programs.

In addition, the Medical Marijuana Patient Protection Act would provide protection from provisions of the federal Controlled Substances Act (CSA) and the Food, Drug, and Cosmetic Act (FDCA) for those qualified to use or obtain cannabis in states that have authorized the use of medical cannabis. In particular, the act prevents the CSA and FDCA from prohibiting or restricting: (1) a physician from prescribing or recommending cannabis for medical use, (2) an individual from obtaining, possessing, transporting within their state, manufacturing, or using cannabis in accordance with their state law, (3) an individual

authorized under state law from obtaining, possessing, transporting within their state, or manufacturing cannabis on behalf of an authorized patient, or (4) an entity authorized under local or state law to distribute medical cannabis from obtaining, possessing, or distributing cannabis to qualified individuals.

Similar versions of this bill (also known as the States' Rights to Medical Marijuana Act) have been introduced in every Congress since the 105th in 1997, but have not yet seen action beyond the committee referral process.

LANDMARK FEDERAL CASES

In the past decade, a dozen states have enacted laws that afford legal protections on individuals who use medical cannabis and the people who provide care to them. However the federal government has never directly challenged the legitimacy of these laws in court. While the state laws differ from federal law and stand contrary to the claim that cannabis has "no accepted medical value", these laws do not directly or positively "conflict" with federal law so as to trigger a Supremacy Clause challenge. Federal case law maintains that individual federal agencies remain free to enforce federal marijuana laws, even in jurisdictions that have enacted medical cannabis laws.

Conant v. McCaffrey



(2000): In the wake of state laws authorizing the use of cannabis in accordance with a recommendation from a physician, federal officials threatened to revoke the prescribing privileges of any physician who provided a recommendation to their patients for medical use. In response, a group of doctors led by AIDS specialist Dr. Marcus Conant filed suit in federal court contending that such a policy violates guarantees under the First Amendment to freedom of speech. The government was enjoined by the U.S. District Court in San Francisco from penalizing physicians who recommend the medical use of

cannabis. The ruling states that physicians have a First Amendment right to make recommendations, but may not aid or abet patients in actually obtaining cannabis.²³⁰

U.S. v. Oakland Cannabis Buyers Cooperative (OCBC)

(2001): In an opinion rendered on May 14, 2001, the U.S. Supreme Court dealt a blow to medical cannabis advocates by declaring that a person in federal court may not argue that distribution of cannabis to those with a recommendation is a medical necessity. As a result, a federal district court in California issued a permanent injunction against the Oakland Cannabis Buyers Cooperative, prohibiting it from distributing medical cannabis to authorized persons. While the Court was adamant that federal law still criminalizes the use and distribution of medical cannabis, the opinion left open several questions, such as constitutional limitations on federal authority, which will be litigated in the OCBC's pending appeal in the Ninth Circuit.²³¹

Conant v. Walters

(2002): On appeal, the Ninth Circuit Court of Appeals held that the federal authorities could not punish, or threaten to punish, a doctor merely for telling a patient that his or her use of cannabis for medical use is appropriate. However, because it remains illegal for a doctor to "aid and abet" a patient to obtain cannabis or conspire with him or her to do so, the court drew the line between protected First Amendment speech and prohibited conduct as follows: A physician may discuss the pros and cons of medical cannabis with his or her patient, and issue a written or oral recommendation to use cannabis within a bona fide doctor-patient relationship without fear of legal reprisal. This is so regardless of whether s/he anticipates that the patient will, in turn, use this recommendation to obtain cannabis in violation of federal law. On the other hand, the physician may not actually prescribe or dispense cannabis to a patient, or recommend it with the specific intent that the patient will use the recommendation like a prescription to

obtain cannabis. There have been no such criminal or administrative proceedings against doctors to date.²³²

U.S. v. Ed Rosenthal



(2006): A jury in San Francisco federal court found Oakland resident Ed Rosenthal guilty of cultivating cannabis, conspiracy to cultivate, and maintaining a place where drugs are manufactured. Members of the jury were not permitted to hear evidence regarding Mr. Rosenthal's deputization by the city of Oakland to grow

medical cannabis in accordance with state law. Rosenthal was deemed guilty and sentenced to one-day, time served. After the trial, jurors publicly recanted their "guilty" verdict after learning facts that were omitted at trial. Mr. Rosenthal appealed to the Ninth Circuit, which reversed his conviction in April 2006, citing jury misconduct.²³³

(2007): Unhappy with the one-day, time-served sentence and subsequent reversal, the Department of Justice re-indicted Mr. Rosenthal, this time adding new (and frivolous) charges for money laundering and tax evasion. Because the prosecutor admitted that these new charges were added in response to Rosenthal's statements against the government, the additional charges were dismissed by the court as a form of vindictive prosecution. Mr. Rosenthal was, again, convicted of cultivating cannabis and, again, was given a sentence of one-day, time-served.²³⁴

Alberto Gonzales v. Angel Raich

(2006): After federal drug enforcement agents seized and destroyed medical cannabis plants belonging to authorized patients and providers in California, filed a lawsuit and sought a preliminary injunction barring the Department of Justice from further interference. The suit argued that application of the Controlled Substances Act in cases where medical cannabis was being cultivated and



consumed for no remuneration entirely within and in accordance with state law exceeded Congress's authority under the Commerce Clause. In December 2003, the Ninth Circuit Court of Appeals held that so

long as the medical cannabis-related activities occur entirely within a state, the Controlled Substances Act shall not apply.²³⁵

The case reached the Supreme Court after Attorney General John Ashcroft appealed the December 2003 federal Ninth Circuit Court of Appeals decision. On June 6, 2005, the U.S. Supreme Court ruled that federal law enforcement officials may prosecute individuals who use medical cannabis, even if they cultivated their own cannabis and even if they reside in a state where such activity is protected under state law. The decision does not invalidate the laws of California or any other state that authorizes the use of cannabis in accordance with a physician's recommendation nor does it suggest that federal officials are required to prosecute those authorized by state law to use or obtain medical cannabis. Decisions about prosecution are still left to the discretion of U.S. Attorneys. The Court indicated that Congress and the Food and Drug Administration should work to resolve this issue.²³⁶

McClary-Raich v. Gonzales

(2007): In 2007, the Ninth Circuit Court of Appeals resolved the remaining issues raised in Raich. In *McClary-Raich v. Gonzales*, the Ninth Circuit held that McClary-Raich: (1) could not obtain a preliminary injunction to bar enforcement of the Controlled Substances Act (CSA) based on common law medical necessity, although she appeared to satisfy the factual predicate for such claim; (2) application of the CSA to medical cannabis cultivators and users did not violate substantive due process guarantees; and (3) the Tenth

Amendment does not bar enforcement of the CSA.

Despite the unfavorable outcome, the court underscores the accepted medical value of cannabis and specifically indicated that there could be a fundamental liberty interest to use cannabis for medical purposes deserving protection. The Court notes, "We agree with Raich that medical and conventional wisdom that recognizes the use of marijuana for medical purposes is gaining traction in the law as well. But that legal recognition has not yet reached the point where a conclusion can be drawn that the right to use medical marijuana is 'fundamental' and 'implicit in the concept of ordered liberty.'" The court concluded, "For now, federal law is blind to the wisdom of a future day when the right to use medical marijuana to alleviate excruciating pain may be deemed fundamental. Although that day has not yet dawned, considering that during the last ten years eleven states have legalized the use of medical marijuana, that day may be upon us sooner than expected."²³⁷

In re: Grand Jury Subpoena for THCF Medical Clinic Records

(2007): The United States District Court for the Eastern District of Washington quashed a subpoena directed to the State of Oregon to reveal information about 17 individuals enrolled in the state medical cannabis program. The court found that the subpoena issued by a federal court to prove criminal violations against a medical cannabis clinic was unreasonable, since the government did not have strong need for the information and the state would be violating its own laws regarding confidentiality to reveal the information sought, which, in addition, would deter people from participating in the state's medical cannabis program. Balancing these interests, the court concluded that the subpoena should be quashed.²³⁸

STATES WITH MEDICAL CANNABIS LAWS

After exhausting attempts to remove cannabis from Schedule I of the Controlled

Substances Act in a series of petitions, frustrated patients and advocates turned to the states for protection. Since 1996, fourteen states and the District of Columbia have adopted laws which authorize the use of cannabis as recommended by a licensed physician without legal sanction: Alaska, Arizona, California, Colorado, Hawaii, Maine, Montana, Nevada, New Jersey, New Mexico, Oregon, Rhode Island, Vermont, and Washington.

Considerable disparities exist among the state laws regarding the specific medical conditions for which physicians may provide a recommendation. California's medical cannabis laws leave treatment decisions to the trained professional judgment of physicians, but many states limit the legal use of medical cannabis to narrow lists of conditions, excluding serious and chronic illness for which research has shown cannabis to be helpful.

The vast majority of arrests and prosecution of cannabis offenses occur at the state and local level. If nothing else, state medical cannabis laws offer individuals authorized to use medical cannabis specific protection from arrest and criminal prosecution in their state. Some also provide civil protections for those who use medical cannabis so these individuals do not lose their parental rights, their property or housing, their jobs or health insurance benefits. A few states establish mechanisms for individuals to obtain medical cannabis from licensed distributors. All of these laws operate in conflict with the federal law and leave patients and their providers vulnerable to federal enforcement raids, arrest, and prosecution by U.S. attorneys.



California (1996)

Proposition 215, also known as The Compassionate Use Act, was approved by 56% of voters. It exempts qualified individuals and their caregivers from criminal liability under state law for the cultivation, possession and use of cannabis

In 2004, California enacted the Medical

Marijuana Program (MMP), pursuant to Senate Bill 420. This bill was adopted by the state legislature in with the following purpose: "(1) Clarify the scope of the application of the act and facilitate the prompt identification of qualified patients and their designated primary caregivers in order to avoid unnecessary arrest and prosecution of these individuals and provide needed guidance to law enforcement officers. (2) Promote uniform and consistent application of the act among the counties within the state. (3) Enhance the access of patients and caregivers to medical marijuana through collective, cooperative cultivation projects."

The MMP included provisions requiring the California Department of Health to establish and maintain a voluntary registry program whereby qualified individuals could acquire a state-wide identification card verifying that the cardholders are enrolled in the state program and authorized to use, possess, cultivate and transport cannabis.



Oregon (1998)

Ballot Measure 67, The Oregon Medical Marijuana Program Act, was approved by 55% of voters. It removes the state's criminal penalties for use, possession, and cultivation of cannabis by individuals whose physicians have advised that the use of cannabis "may mitigate the symptoms of effects" of debilitating medical conditions. The measure also created a mandatory registry program and permitted licensed individuals to cultivate up to seven plants in accordance with medical need. Later, the state legislature increased the limit to 24 plants per patient.



Alaska (1998)

Ballot Measure 8 was approved by 58% of voters in Alaska. The measure removed criminal penalties for individuals who suffer from a debilitating medical condition for which approved medicines have failed and possess a recommendation for a physician to use cannabis. In 1999, the state

legislature passed Senate Bill 94 which created a mandatory state registry system and removed legal protections for those who refuse to register with the state health department, or who possess greater amounts of cannabis than authorized by state law.



Washington (1998)

Initiative 692 was approved by 59% of voters. The law permits individuals with terminal illnesses and persons with specific chronic diseases to use and possess cannabis once they've received appropriate documentation from their physician. The law further protects their physicians and primary caregivers against criminal prosecution and/or penalizing administrative actions by the state of Washington. The law only gives an affirmative defense at trial, not a protection from arrest.



Maine (1999)

The Maine Medical Marijuana Act of 1998 was enacted to protect individuals who find therapeutic and palliative benefits from using cannabis from civil or criminal penalties when their doctors advise that such use may provide a medical benefit to them and when other reasonable restrictions are met regarding that use. In 2009, the law was amended to increase the number of conditions covered under this law. The amendment also instructed the Department of Health and Human Services to establish a registry identification program for patients and caregivers.



Hawaii (2000)

This was the first state in which the legislature debated and adopted a law later signed by the governor which authorized the use of medical cannabis. Specifically, the legislation removes state-level criminal penalties for medical cannabis use, possession, and cultivation of up to seven plants. A physician must certify that the patient has a debilitating condition for which "the potential benefits of the medical use of cannabis would likely outweigh the health risks." Hawaii's mandatory state registry pro-

gram is housed in the state's Department of Public Safety, one of the few states where law enforcement is responsible for administering the medical cannabis program.



Colorado (2000)

Amendment 20 to the state constitution was approved by 54% of the voters. As adopted, the law authorizes individuals diagnosed by a physician as having a debilitating condition to use cannabis in accordance with a recommendation from a physician. The Board of Health has established a mandatory registry program whereby individuals and a caregiver may possess two usable ounces of cannabis and up to six plants. Colorado's law was amended in June of 2010 to provide a regulatory framework for dispensaries, including giving local communities the ability to ban or place controls on the operation, location and ownership of the dispensaries.



Nevada (2000)

Question 9 amended the state constitution and was approved by 65% of voters. The law removes state-level criminal penalties against those who have obtained a "written documentation" from their physician affirming that the use of cannabis may alleviate his or her condition. The law establishes a confidential state registry that issues identification cards to qualified patients.



Vermont (2004)

Vermont became the second state to pass a medical cannabis law by the legislative process. The law was enacted in 2004 without the Governor's signature. In accordance with the law, individuals qualified to use cannabis are authorized to cultivate up to nine cannabis plants in a locked room and to possess two ounces of dried cannabis under the supervision of the Department of Public Safety, which maintains a patient registry.



Montana (2004)

Ballot initiative 148 was approved by 62% of voters. The law permits

qualified individuals to use cannabis under medical supervision. Eligible medical conditions include cancer, glaucoma, HIV/AIDS, wasting syndrome, seizures, and severe or chronic pain. A doctor must certify that the patient has a debilitating medical condition and that the benefits of using cannabis would likely outweigh the risks. The patient may grow up to six plants and possess one ounce of dried cannabis. The state public health department maintains a mandatory registry system.



Rhode Island (2006)

In a gubernatorial veto override, the Rhode Island state legislature enacted The "Edward O. Hawkins and Thomas C. Slater Medical Marijuana Act" in 2006. Rhode Island's law allows individuals to possess up to 12 plants or 2-1/2 ounces to treat cancer, HIV/AIDS, and other chronic ailments. The law included a sunset provision and was set to expire on July 1, 2007, but the law was made permanent in 2007. In 2009, the law was amended by substituting The Edward O. Hawkins and Thomas C. Slater Medical Marijuana Act for the original bill. Though the Governor vetoed this bill, both the Senate and House overrode this veto and the new law was adopted.



New Mexico (2007)

The Lynn and Erin Compassionate Use Medical Marijuana Act was adopted by the state legislature, and enacted by Governor Bill Richardson in 2007. The law requires the state's Department of Health to set rules governing the distribution of medical cannabis to state-authorized patients. Unlike other state programs, the legislation directed the establishment of state-licensed "cannabis production facilities." In 2008, after abandoning a plan to have state officials cultivate cannabis for distribution to program participants, the New Mexico Department of Health has proposed licensing private growers and non-profit distributors.



Michigan (2008)

After numerous Michigan cities, including Detroit and Ann Arbor, had passed medical cannabis measures, the state's voters in 2008 passed the "Michigan Medical Marihuana Act" by 63% of the vote. Patients may qualify for protections with a doctor's recommendation for a number of debilitating conditions. Patients may possess up to 2.5 ounces of usable marijuana and may cultivate up to twelve marijuana plants in an enclosed, locked area.



New Jersey (2010)

The New Jersey Compassionate Use Medical Marijuana Act, was signed into law by outgoing Governor John Corzine on January 18, 2010. The purpose of the law is to protect "patients who use marijuana to alleviate suffering from debilitating medical conditions, as well as their physicians, primary caregivers, and those who are authorized to produce marijuana for medical purposes" from "arrest, prosecution, property forfeiture, and criminal and other penalties." The New Jersey Department of Health and Senior Services released draft rules outlining the registration and application process in October of 2010. Finding these rules to be too restrictive, the New Jersey State Legislature ultimately sent them back to Governor Christie, ordering him to rewrite the proposed regulations.



Washington, DC (1998 & 2010)

In 1998, voters in Washington, DC approved a ballot measure to authorize the use of medical cannabis in accordance with a physician's recommendation. During the 105th Congress, an amendment to the Consolidated and Emergency Supplemental Appropriations Act, 1999, instructed that the District of Columbia could not spend appropriations money to administer a ballot initiative. The amendment was successfully challenged, and 69% of voters in the nation's capital approved the measure. The "Legalization of Marijuana for Medical Treatment Amendment Act of 2010" was approved 13-0 by the Council of the District of

Columbia on May 4, 2010 and signed by the Mayor on May 21, 2010, becoming effective on July 27, 2010. After being signed by the Mayor, the law underwent a 30-day Congressional review period. Congress did not act to stop the law, so it became effective when the review period ended.



Arizona (2010)

Ballot proposition 203, The Arizona Medical Marijuana Act, was approved by 50.13% of voters in November of 2010. It allows registered qualifying patients to obtain cannabis from a registered non-profit dispensary, and to possess and use medical cannabis to treat the condition. Registration is mandatory. Unlike other state laws, Arizona's law specifies that a registered patient's use of medical cannabis is to be considered equivalent to the use of any other medication under the direction of a physician and does not disqualify a patient from medical care, including organ transplants.

The law also states that employers may not discriminate against registered patients unless that employer would lose money or licensing under federal law. Employers may not penalize registered patients solely for testing positive for cannabis in drug tests, although the law does not authorize patients to use, possess, or be impaired by cannabis on the premises or during the hours of employment.

SPECIAL CASES AND OTHER STATE LAWS

Maryland (2003)



In 2003, Maryland enacted the Darrell Putnam Compassionate Use Act. The bill applies to defendants possessing less than one ounce of cannabis and who can prove that their cannabis-related activities were in pursuit of a medical necessity and with a doctor's recommendation. Under Maryland's law, individuals are protected from a criminal record and possible imprisonment. The maximum penalty for possession of cannabis by a patient with a valid doctor's recommendation is \$100. Governor

Ehrlich, the first Republican governor to sign a bill relaxing penalties for medicinal use of cannabis, signed the measure despite pressure from the Bush administration to veto it.

Connecticut (2007)

In 2007, after five legislative committees and the full Connecticut House and Senate passed H.B. 6715, Gov. M. Jodi Rell (R) vetoed the legislation which would have permitted seriously ill individuals to use medical cannabis with their doctor's recommendation. Although more than 60% of Connecticut's legislators voted in favor of the bill, two-thirds of each chamber is necessary to override a veto, a veto-override vote never occurred.

Other state laws

Between 1978 and 1997, 35 states and the District of Columbia passed legislation acknowledging the potential medical value of cannabis. These states include: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Illinois, Iowa, Louisiana, Massachusetts, Maine, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wisconsin.

Except for the District of Columbia and the fourteen states that explicitly grant protection from arrest, most of these state laws do not currently protect medical cannabis users from state prosecution. Some of these laws permit individuals to acquire and use cannabis through therapeutic research programs, however, none of these programs has been operational since 1985. Other state laws allow doctors to prescribe cannabis or allow people to possess cannabis if it has been obtained through a prescription, but the federal Controlled Substances Act prevents these laws from being implemented. A few states have placed cannabis in a controlled drug schedule that recognizes its medical value.

THE CROSSFIRE OF STATE & FEDERAL LAW

Despite hundreds of peer-reviewed scientific research studies, including dozens of double-blind, placebo-controlled clinical trials, all of which demonstrate cannabis can effectively treat symptoms of HIV/AIDS, muscle spasticity, and severe neuropathic and chronic pain, among other conditions, the federal Department of Health and Human Services continues to maintain the position that cannabis "has no currently accepted medical use in treatment in the United States."

The federal government's dogmatic approach to marijuana is dangerous and causes unnecessary suffering by deterring individuals who suffer from serious and chronic illness from obtaining and using cannabis, a remedy that could provide needed relief and significantly improve quality of life. Worse still, it allows the Department of Justice and the Drug Enforcement Administration to conduct a campaign of intimidation against individuals authorized in the various states to use or provide medical cannabis in accordance with state law.

For more than 30 years, advocates have used the appropriate administrative channels to petition the United States to remove cannabis from the list of Schedule I drugs, those with no medical use. After exhaustive hearings, the DEA's Chief Administrative Law Judge ruled in 1988 that cannabis should be made available for medical use. But despite overwhelming evidence of the therapeutic efficacy of cannabis, federal law continues to prohibit its use for medical purposes.

As a consequence of this longstanding federal intransigence, advocates sought legal protections within the various states. Since the founding of the nation, state and local governments have long been "laboratories of democracy," particularly in cases when federal obstruction was borne of political cowardice or ignorance. More than one-third of the U.S. population currently lives in a state that has authorized the use of medical cannabis, and more states consider similar laws each year.

To the extent that the vast majority of arrests for cannabis-related activity occur at the state and local level, these state laws offer substantial protection. However, while these laws shield authorized persons from arrest and prosecution, many individuals who use cannabis to relieve symptoms of serious or chronic illness continue to suffer pervasive discrimination in employment, child custody, housing, public accommodation, education, and medical care. Moreover, the conflict between state and federal laws leaves some individuals - usually those providing a safe point of access or engaged in the cultivation of medical cannabis - vulnerable to federal prosecution and lengthy prison sentences. And the majority of Americans do not enjoy any legal protection if their doctors recommend cannabis for treatment.



The Community-Based Solution to Access: Medical Cannabis Dispensing Centers

So long as research supports the therapeutic value of cannabis and physicians recommend it to control symptoms of serious and chronic illness, patients will seek safe and consistent access to quality cannabis. Many individuals suffering from a serious or chronic illness may not have the time or resources to cultivate their own cannabis, or might not know people willing and able to act as a caregiver and grow cannabis on their behalf. As a result, individuals are forced to break the law and risk unnecessary and potentially harmful entanglements with illicit dealers and law enforcement officers in order to gain access to cannabis.

Medical cannabis dispensing centers have emerged as a sensible, community-based response designed to provide a safe place for qualified individuals to access a consistent supply of medical cannabis. These points of access represent an effort in various states to fully implement state law. Moreover, the importance of these facilities is underscored by the reluctance of the federal government to address the issue of medical cannabis in a meaningful way.

While most of these facilities operate like wellness facilities, medical cannabis dispensing centers exist specifically to provide qualified individuals exclusive and reliable access to cannabis, much as a pharmacy exists to provide prescribed medication. Moreover, the regulations that permit and control dispensing centers ensure local governance and oversight of the cultivation and distribution of medical cannabis in accordance with state law. By requiring compliance with comprehensive regulatory ordinances, local officials can monitor the operation of medical cannabis dispensing centers to be certain that proper verification procedures are followed, to assure that the place and hours of operation are consistent with community needs, and to minimize diversion of medical cannabis to the illicit market.

In California, Colorado, and a few other states, locally regulated patient-collectives have been widely successful. In most cases, these collectives pool the resources of qualified members to cooperatively cultivate medical cannabis and distribute it to other members who may not be able to provide it for themselves. For these individuals, particularly those most in need, dispensing centers provide more than reliable access; they also offer alternative forms of cannabis extracts and experienced guidance on dosage and efficacy for different cannabis varieties. Many even have social services and support networks that assist those who would otherwise be isolated by their conditions.

In many cases, these dispensing centers subsi-

dize access to other natural or complimentary health care services that would otherwise be unavailable to their clients. Whether dispensing centers are regulated by the state or (someday) the federal government, local policymakers still have an important role to play to the extent any proper regulation will require zoning, permitting, policing, fees, and other issues which will remain the prerogative of local governments.

Since the U.S. Supreme Court issued the decision in *Gonzales v. Raich*, which did not invalidate state medical cannabis laws, and upheld *Kha v. Garden Grove*, which clarified the responsibility of the states to uphold state and local laws even when they are in conflict with federal law, many local and state governments have been working overtime to implement their state laws to curb abuse and to set up the appropriate systems to carefully regulate and control the distribution of medical cannabis to authorized individuals in their communities. Community-based medical marijuana access centers are beginning to take root in locations outside of California. Oregon, Washington, Colorado, New Mexico, Maine, Michigan, Montana, Rhode Island, and the District of Columbia are just a few of the jurisdictions seeking to appropriately control and regulate the production and distribution of medical cannabis.

The Federal Response: Interrupt Access, Intimidate Providers, Undermine Authority

Despite the affirmative implementation efforts in 15 states and the District of Columbia, the Department of Justice and the Drug Enforcement Administration have chosen to use their discretion to undermine the effective implementation and authority of state law, instead of working to bridge the gap between legitimate state laws and outdated federal laws. In 1999, federal agencies initiated a series of paramilitary style enforcement raids on individuals and collectives authorized to use or provide medical cannabis in accordance with California state law that continues today.

Following the Supreme Court's decision in *Raich*, federal agencies intensified their enforcement tactics. Between 2007 and 2008, national advocates recorded an unprecedented number of enforcement raids against individuals authorized to use or dispense medical cannabis in accordance with their state law, and currently, the Department of Justice is seeking to prosecute more than 100 of these individuals even though they were adhering to state law. These campaigns to circumvent state law happened despite inquiries from members of the U.S. House Judiciary Committee and requests from local policymakers to halt raids in deference to local regulators.

Federal enforcement activity against individuals qualified to use or possess medical cannabis has not been restricted to California. In Washington, federal law enforcement agents in 2007 raided the offices of a medical cannabis advocacy group that was supplying hundreds of authorized individuals with starter plants. In New Mexico a few months later, the DEA threatened state officials with federal prosecution if they proceeded to implement a state-mandated medical cannabis distribution program. In Oregon that same year, a federal grand jury subpoenaed the medical records of 17 qualified individuals enrolled in the Oregon Medical Marijuana Program. A federal court later denied the subpoena of patient records, but as of March 2011, federal authorities are attempting to subpoena the confidential records of seven patients enrolled in Michigan's medical cannabis program, despite a provision of state law that makes it a crime to release such information.

In 2008, the Department of Justice began to levy threats against property owners who leased property to medical cannabis dispensing collectives. On June 30, the U.S. Attorney for the Central District of California and Special Assistant U.S. Attorney, Asset Forfeiture Section, sent letters to multiple property owners requesting that they attend a meeting in August at which the U.S.

Attorney delivered an ultimatum: evict the collectives within 45 days or face federal asset forfeiture, prosecution, and DEA raids at the facilities.

Another tactic employed by the federal government is designed to interrupt safe access by preventing collective operators from depositing their funds into bank accounts. Forcing collectives to carry large sums of cash on hand makes them an attractive risk for criminal activity which risks the safety of patients and providers affiliated with these establishments. To remedy the situation, ASA is engaging congressional allies.

In May 2010, 15 Members of Congress, including members from both the Banking and Judiciary committees, sent a letter to Treasury Secretary Timothy Geithner urging him to issue "written guidance for financial institutions," which would commit the Treasury Department to not targeting those institutions whose account holders are in compliance with state medical marijuana laws. This dialogue with Treasury and Congress is ongoing, and if history is any indication, is not likely to be resolved until the federal government ends the conflict between state and federal medical marijuana laws.

The latest federal interference tactic utilizes an antiquated tax code (IRS provision 280E) to prohibit medical marijuana dispensing centers from taking standard business deductions and credits. Several medical cannabis centers have been targeted under the guise of federal tax audits. These "audits" appear to target centers serving the greatest percentage of the population.

For the patients who rely on access to the medicine these centers provide, enforcement of this tax provision could result in a number of consequences. First, collectives will significantly raise the cost of medicine and services in order to compensate for the loss of standard business deductions and credits. Second, it's possible that some collectives may simply stop filing federal tax returns, which may jeopardize the integrity of the centers and put patients in

harm's way. And finally, in the worst case, medical cannabis dispensing centers will simply shut their doors, forcing what are otherwise well regulated facilities underground.

Despite these tactics, the movement for safe access continues to thrive across the country. Heightened federal enforcement efforts and prosecutions have had a negligible impact on the distribution of medical cannabis in California and other states. In fact, more jurisdictions, not fewer, are seeking to create the regulations necessary to control safe production and distribution of marijuana for medical purposes.

The Obama Administration recently issued written guidelines to U.S. Attorneys discouraging the prosecution of patients and providers who are in compliance with existing state laws. These guidelines are an important step in the right direction and a welcome and significant departure from the policies of previous Administrations. Of course, much more needs to be done to ensure that all patients who might benefit from medical cannabis have access to it.

The Advocates Solution: ASA's Federal Policy Agenda

ASA's National Office opened in April 2006 to bring the patients' voice to Washington, D.C., to end the arrests and prosecutions of patients using medical cannabis therapeutics, to end the ban on research, and to create an access plan for the entire nation. ASA works on Capitol Hill and within the Administration to improve the federal government's understanding of the therapeutic uses of cannabis and the immediate and long-term needs of our members. ASA's advocacy in DC is based on the following Federal Policy Agenda. When implemented, these policies will finally free state and local governments to adopt effective, compassionate access models.

1. End Federal Raids, Intimidation, and Interference with State Law.

Fifteen states and the District of Columbia have passed laws authorizing individuals liv-

ing with a serious or chronic illness to use and obtain cannabis as recommended by a physician. However, these state laws differ from the federal law and leave patients and their providers vulnerable to federal raids, arrest, and prosecution. Since 2006, many state and local governments have been working overtime to fully implement their state laws in order to curb abuse and create the appropriate systems to carefully regulate and control the distribution of medical cannabis to authorized individuals in their communities.

Effective implementation of state medical cannabis laws is stymied by federal interference. The U.S. Department of Justice, together with the Drug Enforcement Administration, has conducted scores of enforcement raids and employed intimidation tactics designed to undermine the implementation of state and local law. The importance of state laws, and the protection they provide, is underscored by the reluctance of the federal policymakers to address the issue of medical cannabis in a meaningful way. Until Congress and the Administration create a comprehensive national medical cannabis strategy, individual states should not be obstructed from responding to the public health needs of their citizens.

2. Permit an affirmative defense and establish federal legal protection for individuals authorized by state or local law to use or provide cannabis for therapeutic use.

Currently, the Department of Justice has prosecuted more than 100 licensed medical cannabis patients and providers.

Unfortunately, federal defendants are forbidden from presenting evidence at trial that their marijuana-related activities were for therapeutic purposes and in compliance with state law, limiting their ability to present a defense in federal court. Congress and the Administration should amend the Controlled Substances Act to provide an affirmative defense in federal court and establish legal protections for individuals who use or provide cannabis for therapeutic use in accordance

with state and local law.

3. Encourage advanced clinical research trials that meet accepted scientific standards.

Federal law clearly requires adequate competition in the manufacture of Schedule I and II substances, but since 1968 the National Institute on Drug Abuse (NIDA) has maintained a monopoly on the supply of cannabis used for legitimate research purposes. The Drug Enforcement Administration helps to protect NIDA's monopoly by refusing to grant competitive licenses for the production of research-grade cannabis. In 2007, U.S. Department of Justice-appointed Administrative Law Judge Mary Ellen Bittner issued an Opinion and Recommended Ruling which concluded that granting competitive licenses would be "in the public interest." However, the Administration has taken no action, and the Administrative Recommendation remains pending.

Congress and the Administration should work to remove the political and bureaucratic obstacles that inhibit clinical research and

instead should create incentives to conduct research in accordance with the Institute of Medicine's recommendations.

4. Create a national medical cannabis strategy that includes a safe and legal access plan.

A scientific consensus supports the therapeutic use of cannabis to control symptoms of serious and chronic illness. In the past decade, clinical research has clearly demonstrated that the use of cannabis and its constituents can safely and effectively treat symptoms of serious and chronic illness like nausea and vomiting, loss of appetite, pain and spasticity.

The science and policy regarding the medical use of cannabis should not be obscured or hindered by the debate surrounding the legalization of marijuana for general use. Scientific consensus coupled with state leadership has provided a solid foundation for federal policymakers to create a comprehensive plan to support long-term solutions for safe and legal access to cannabis for therapeutic use and research.

MODEL LEGISLATION

For model state legislation on medical cannabis and a model local ordinance for regulating medical cannabis dispensing centers, see the Appendix.

The Medical Cannabis Advocates' Handbook

APPENDIX

The CMA has always recognized and acknowledged the unique requirements of those individuals suffering from a terminal illness or chronic disease for which conventional therapies have not been effective and for whom marijuana for medicinal purposes may provide relief."

—Canadian Medical Association

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223. Gettman, J. Introduction to Marijuana Rescheduling, www.drugscience.org/lib/rsch_intro.html
224. US DOJ. DEA. Denial of Petition; Notice. Federal Register, v. 66, no. 75, April 18, 2001. p. 20037.
225. No. 01-1182, United States Court Of Appeals For The District Of Columbia Circuit, March 19, 2002, Argued, May 24, 2002, Decided.
226. H.R. 1265, The Medical Marijuana Deterrence Act 1997, sought to deny federal benefits to individuals convicted of a state offense in a state that permits the medical use of marijuana; H.R. 1310, The Medical Marijuana Prevention Act, would have given the Attorney General authority to revoke a physicians right to prescribe controlled substances if they recommended smoking marijuana for therapeutic use; and, H.R. 3184, would have clarified that federal controlled substances laws still apply, even in situations where the state law has authorized the use and distribution of marijuana for medical purposes. These bills were referred to committee where no action was taken.
227. H.J. Res 117, House Vote #435 in 1998
228. Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999. P.L. 105-277, October 21, 1998, St. 2681-760
229. For complete list of approximately two dozen federal convictions, see www.AmericansForSafeAccess.org/article.php?list=type&type=184
230. www.AmericansForSafeAccess.org/downloads/Conant_Ruling.pdf
231. www.AmericansForSafeAccess.org/downloads/US_v_OCBC.pdf
232. www.AmericansForSafeAccess.org/downloads/conantwalters.pdf
233. www.AmericansForSafeAccess.org/downloads/Rosenthal_Ninth_Circuit_Ruling.pdf
234. www.AmericansForSafeAccess.org/downloads/Rosenthal_Ninth_Circuit_Ruling.pdf
235. Raich v. Ashcroft, 352 F.3d 1222 (9th Cir. 2003)
236. Gonzales v. Raich, 125 S.Ct. 2195, 2205 (2005)
237. www.AmericansForSafeAccess.org/downloads/Raich_v_Gonzales.pdf
238. www.AmericansForSafeAccess.org/downloads/landmark.in.re.grand.jury.pdf

