

No. S138130

IN THE
SUPREME COURT OF CALIFORNIA

Gary Ross,

Plaintiff/Petitioner,

v.

RagingWire Telecommunications, Inc.,

Defendant/Respondent

After a Decision By the Court of Appeal
Third Appellate District
Case No. C043392

BRIEF OF THE AMERICAN PAIN FOUNDATION,
AMERICAN MEDICAL WOMEN'S ASSOCIATION,
LYMPHOMA FOUNDATION OF AMERICA, AMERICAN NURSES
ASSOCIATION, CALIFORNIA NURSES' ASSOCIATION, AIDS
ACTION COUNCIL, NATIONAL WOMEN'S HEALTH NETWORK,
DOCTORS OF THE WORLD-USA, GAY MEN'S HEALTH CRISIS
AS AMICI CURIAE IN SUPPORT OF PETITIONER

Daniel Abrahamson, State Bar No. 158668
Tamar Todd, State Bar No. 211865
Theshia Naidoo, State Bar No. 209108
DRUG POLICY ALLIANCE
819 Bancroft Way
Berkeley, California 94710

DESCRIPTION OF AMICI

Amicus Curiae American Pain Foundation (“APF”) is the nation's largest nonprofit organization devoted exclusively to serving the needs of people with chronic and acute pain. APF's mission is to improve the quality of life for all Americans with pain by raising public awareness, providing practical information, promoting research, and advocating removal of barriers to effective pain management.

Amicus Curiae American Medical Women’s Association (“AMWA”) is a national, non-profit organization of over 10,000 women physicians and physicians-in-training representing every medical specialty. Founded in 1915, AMWA is dedicated to promoting women in medicine and advocating for improved women’s health policy.

Amicus Curiae Lymphoma Foundation of America (“LFA”) is a national, nonprofit organization devoted to helping lymphoma patients and their families. Founded in 1986 by people with lymphoma who came together to help each other recover from cancer, LFA organized the first lymphoma support group in the United States. LFA advocates for patients’ right to know about the risks and benefits of cancer treatments – whether standard, experimental, or alternative. LFA offers free support, counseling, and advice to patients. Over 60,000 new cases of lymphoma (cancer of the lymph system) will be diagnosed this year. It is the Lymphoma Foundation’s experience, over many years, with thousands of patients, that marijuana is an efficacious and at times necessary treatment for nausea, vomiting and lack of appetite — all serious, sometimes life-threatening symptoms that afflict many lymphoma patients undergoing chemotherapy and radiation.

Amicus Curiae American Nurses Association (“ANA”) is a national nonprofit membership organization incorporated in the District of

Columbia, with headquarters in Silver Spring, MD. ANA is the professional association that represents the interests of the nation's 2.9 million registered Nurses. ANA is comprised of 54 constituent member associations, including one in every state of the United States, the District of Columbia, Guam, the U.S. Virgin Islands and federal military nurses, with over 150,000 members. ANA has members in California through its affiliate ANA/California. ANA not only develops the Code of Ethics for Nurses and the standards of nursing practice, it actively promotes patient safety, workplace rights, appropriate staffing, workplace and environmental health and safety, and the public health. ANA has national policies that support "the right of patients to have safe access to therapeutic marijuana/cannabis under appropriate prescriber supervision" as well as effective pain management.

Amicus Curiae California Nurses' Association ("CNA") is a professional nursing association of more than 65,000 professional nurses practicing in the State of California. CNA's primary goals are to promote patient advocacy that protects patients and ensures a single standard of quality healthcare for all. CNA also seeks to develop the professional and educational advancement of professional nurses, and to foster high standards of nursing practice.

Amicus Curiae AIDS Action Council serves as a national voice for its members—community-based organizations, local health departments and clinics, service providers, and health educators—by advocating for effective legislative and social policies and programs for HIV prevention, treatment, and care. AIDS Action is dedicated to the development, analysis, cultivation, and encouragement of sound policies and programs in response to the HIV epidemic. AIDS Action has been instrumental in the development and implementation of major public health policies to improve the quality of life for the more than one million Americans who

are HIV positive. AIDS Action Council collaborates with the greater public health community to enhance HIV prevention programs and care and treatment services; and to secure comprehensive resources to address community needs until the epidemic is over.

Amicus Curiae National Women's Health Network (“NWHN”) was founded in 1975 to give women a greater voice within the healthcare system. NWHN is a membership-based organization supported by 8,000 individuals and organizations nationwide. NWHN does not accept financial support from pharmaceutical companies, tobacco companies or medical device manufacturers. NWHN improves the health of all women by developing and promoting a critical analysis of health issues in order to affect policy and support consumer decision-making. NWHN aspires to a health care system that is guided by social justice and reflects the needs of diverse women.

Amicus Curiae Doctors of the World-USA (“DOW-USA”) is an independent, non-profit, non-sectarian organization working at the intersection of health and human rights. Founded in the United States in 1990 by the late Dr. Jonathan Mann, DOW-USA is the autonomous U.S. affiliate of Médecins du Monde, the French health and human rights organization. DOW-USA is part of an international network, whose aim is to provide the world’s most vulnerable populations with medical assistance. DOW-USA is dedicated to creating sustainable programs that promote and protect health and human rights in the United States and by providing medical and public health assistance and mentoring to those in greatest need and, within the framework of health care services, contributing to the processes of peace, reconciliation, and human rights.

Amicus Curiae Gay Men’s Health Crisis (“GMHC”) is a not-for-profit, volunteer supported and community-based organization committed to national leadership in the fight against HIV/AIDS. GMHC’s mission is

to reduce the spread of HIV, help people with HIV maintain and improve their health and independence—including through reasonable access to employment opportunities—and keep the prevention, treatment and cure of HIV an urgent national and local priority. Founded in 1981, and based in New York City, GMHC provides HIV prevention and care services to thousands of people living with or at risk for HIV/AIDS and advocates for evidence-based, effective prevention and care interventions globally. GMHC is committed to ensuring that individuals with HIV/AIDS and other life-threatening illnesses receive compassionate and medically appropriate care. Inasmuch as this case concerns the ability of such individuals to take their doctor’s best advice without suffering extra-medical consequences, *e.g.*, the loss of a job, GMHC considers its resolution a matter of significant concern to the people GMHC serves.

SUMMARY OF ARGUMENT

This case and the questions it raises are of profound concern to amici and the thousands of seriously ill Californians for whom they care. As a matter of ethical duty, physicians and medical professionals must work with a patient to identify the course of treatment that is best for him or her – a necessarily individualized calculus that takes into account not only therapeutic efficacy, but also the individual’s religious and ethical views as well as considerations such as toleration, risks, and adverse effects. To many individuals making such decisions, the ability to earn a living is, unsurprisingly, a consideration of utmost importance and often represents a great challenge: while medical conditions often limit such individuals’ participation in the workforce, the courses of treatment, which often carry potent and debilitating side-effects, can also complicate and interfere with their ability to earn a living.

In an unprecedented opinion, the court below not only held that private employers may overrule individuals' decisions as to their own medical care, it upheld the power of employers to fire a person with a disability for pursuing the course of treatment recommended by his or her physician, in full compliance with State law, for his or her condition – and to do so without any showing (or even a plausible claim) that the disfavored treatment would adversely affect the employer's legitimate interests in workplace safety or job performance.

That rule of law is extraordinary in every way. The law has long recognized that individuals have a fundamental right to make decisions about their own medical treatment – to the point of respecting such decisions even when they seem medically imprudent or misguided, and it is obviously that much more unusual to allow a private employer to condition a disabled person's employment on him or her foregoing the treatment recommended by his or her physician.

Recognition of the medical soundness of the treatment the employer seeks to punish is no idiosyncratic view: the State of California has itself expressly recognized the real and substantial health benefits that marijuana can provide to seriously ill individuals – and that judgment, in turn, is supported by a large and growing body of medical and scientific research. Indeed, given the medical reality at the center of California's law – that there exists a class of individuals for whom treatment with marijuana is uniquely effective and/or indispensable, it would be hard to imagine a rule of law more inimical to the basic purposes of the Federal Employment and Housing Act ("FEHA") than one which conditioned the statute's protections on a disabled individual's rejecting the very treatment capable of making him well enough to return to work. More generally, law and medicine flatly refute the notion that there is any rational justification, let alone a legally "compelling" one, for treating doctor-recommended

therapeutic marijuana use differently from other courses of treatment for purposes of the FEHA.

This case, of course, is about the meaning of State employment law—not federal controlled substances law; but it fundamentally misunderstands the federal statute to assume that its treatment of marijuana, as against, for example, OxyContin or morphine, expresses a judgment about relative workplace effects. Indeed, Marinol, a federally “legal” drug that shares a key active ingredient with herbal marijuana is disliked by many individuals with serious illness because it has more potent psychoactive effects than does herbal cannabis. Similarly, many drugs that are not controlled at all have well-known side-effects, such as drowsiness and blurred vision, which can limit an individual’s ability to perform certain workplace tasks. Where such adverse effects are undeniably present, of course, an employer’s ability to deny or terminate a disabled individual’s employment depends on precisely the sort of individualized, context-specific inquiry into burden and accommodation rejected by the court below.

The decision below—and Respondent’s argument—rest on a further, serious fallacy: the assumption that an employer’s power to test for a particular substance is coextensive with its authority to deny employment based on a positive test. But the fact that an employer may have a legitimate interest in (1) knowing that a particular employee has ingested a particular substance, *e.g.*, whether a commercial pilot who recently underwent oral surgery still has codeine in his system—or even (2) rejecting a job applicant whose positive drug test is indicative of drug abuse, does not establish that the employer may presume, absent additional information, that a positive drug test is the result of drug abuse and fire an individual whose use of the drug was physician-recommended and supervised as part of a course of treatment for a serious medical condition.

Finally, even assigning no independent significance to individual and physician judgment about which treatment is most effective and tolerable, the alternatives the employer would impose upon Mr. Ross and others in his position, *e.g.*, leaving a disabling condition untreated or treating it with “conventional” drug therapies—are ones that themselves carry serious and undeniable adverse workplace effects. Untreated and under-treated illnesses cost the economy billions of dollars annually, and it is likewise indisputable that many “legal” drugs, properly used, can affect work performance and safety in ways far more serious than off-premises medical marijuana use possibly could.

For reasons set forth more fully below, *Amici* urge this Court to set aside the decision of the intermediate Court of Appeal(s) because it thwarts these various important interests, and erects an unnecessary and unfortunate barrier to effective relief for potentially thousands of members of California’s workforce who suffer from acute or chronic pain, or other debilitating medical conditions.

ARGUMENT

I. EMPLOYERS HAVE NO GENERAL AUTHORITY TO OVERRULE TREATMENT DECISIONS

At the heart of this case is Respondent’s claim that Mr. Ross is entitled to pursue “any and all legal medical treatments” – *except* the one medical treatment best suited to Mr. Ross, recommended by his physician, and sanctioned by the State of California, based on scientific evidence that the particular therapy is effective – and, for some patients, uniquely so. (*See* Respondent’s Brief at p. 42.) Respondent’s position is extraordinary in that it runs directly counter to both prevailing law and established principles of public policy.

For patients afflicted with serious medical conditions, the decision of how and to what extent to pursue a recommended course of treatment is often intricately connected to other important interests and concerns, including, unsurprisingly, the ability to work. Whether and how to balance one's professional obligations and wage earning capacity with competing demands of medical treatment and convalescence is a common and challenging consideration for ill and injured workers: while medical conditions often limit individuals' functioning on the job, the courses of treatment often carry potent and debilitating side-effects which can also complicate and interfere with individuals' ability to earn a living.

Individuals, of course, do not require employers' permission to care for themselves. Indeed, "[i]t is ... eminently reasonable for employees to expect that their employers will respect, *i.e.*, not attempt to coerce or otherwise interfere with their decisions about their own health care. *Pettus v. Cole* (1996) 49 Cal. App. 4th 402, 459 (1st App. Dist). In fact, an employee could reasonably expect a private employer to yield entirely with respect to decisions made in the context of the doctor-patient relationship, given the unique and uniquely important status afforded this relationship. That medical treatment is a matter for individuals and their physicians is not simply a widely held belief that tends to further the general public interest: it is a bedrock protection afforded individuals by California law.

The physician-patient relationship embodies a series of ethical and legal obligations, including the duty of the physician to provide honest medical counsel that is derived from an individualized calculus of the patient's condition and restorative needs. Such a calculus necessarily takes into account not just the patient's current medical status but also the patient's larger health history as well as the patient's social, psychosocial and cultural circumstances. For example, the treatment provider must regard not only the therapeutic efficacy of a particular treatment regimen,

but also the patient’s religious and ethical views; the patient’s ability and willingness to tolerate potential adverse risks and side-effects of treatment; and the patient’s overall life priorities. The treatment provider draws upon his or her judgment, knowledge, and experience to make a recommendation about the appropriate course of treatment, and communicates that recommendation in the form of advice regarding what the provider believes is the best balance of risks and benefits for that particular patient in light of the patient’s unique circumstances. Physicians who fail to particularize their patient assessments and tailor their treatment plans are subject to professional censure and sanction. (*See generally*, Cal. Bus. & Prof. Code § 2000 *et seq.* (describing the investigative and enforcement powers of the Medical Board of California.))

The medical use of marijuana does not alter this essential framework. The whole thrust of California’s Compassionate Use Act of 1996 (the “Compassionate Use Act”) (Cal. Health & Saf. Code § 11352.5), both its premise and its operative effect, is to acknowledge that, like other medications, marijuana can be medically appropriate treatment—and to draw a sharp line between medical use, pursuant to a physician recommendation, and possession for other reasons, which remains prohibited under State (as well as federal) law. The Compassionate Use Act draws upon the legally cognizable duties of physicians and recognizes that the public interest is best served when the State respects – and gives legal effect to – the judgments of physicians who act pursuant to those duties, and in accordance with their training, experience and clinical insight.

Specifically, California’s medical marijuana law “is closely calibrated to exempt from regulation only patients who have consulted a physician. And the physician may only recommend marijuana when he has

made an individualized and bona fide determination that the patient is within the small group that may benefit from its use.” *Conant v. Walters* (2002) 309 F.3d 629, 646 (9th Cir.) (Kozinski, J., concurring), *cert. denied*, (2003) 124 S. Ct. 387. *See also People v. Mower* (2002) 28 Cal.4th 457, 482 (equating possession of marijuana in compliance with Compassionate Use Act to “the possession of . . . any prescription drug with a physician’s prescription.”). In other words, the ethical obligations of physicians when it comes to recommending medical marijuana are substantially the same as for prescribing controlled substances, ordering chemotherapy or radiation therapy, or advocating one or more of a host of other traditional and targeted medical interventions. At the very least, no physician is *required* to render advice to patients about marijuana. But should a physician choose to do so, a formal recommendation should be made in the context of a proper doctor-patient relationship and in compliance with the professional standards of the community.¹ In short, when physicians recommend medical marijuana pursuant to the Compassionate Use Act, they “are performing their normal function as doctors [T]hey are acting in their professional role in conformity with the standards of the state where they are licensed to practice medicine.” *Conant*, 309 F.3d 647 (Kozinski, J., concurring).

California law could not be clearer that when “the traditional doctor/patient relationship, with the host of concomitant duties created by such a relationship” is at issue, *Pettus*, 49 Cal. App. 4th at 430, employer interference with that relationship should not, as a general matter, be

¹ *See* California Medical Association, “CMA On-Call Document 1315, The Compassionate Use Act of 1996: The Medical Marijuana Initiative,” available at <http://www.medbd.ca.gov/Medical_Marijuana.htm> (same).

countenanced. *Id.* at 446. Nor should it be overlooked that respecting the medical autonomy of employees inures to the benefit of employers, as well. Employers have an unmistakable interest in cultivating a productive and effective workforce and ensuring a safe workplace. These interests are best served when the general health and well-being of their employees are protected and maintained, an accomplishment achieved, in part, by permitting workers to access individualized health care services from qualified health professionals in a timely manner, and affording them a reasonable opportunity to follow the tailored advice and recommendations of their treatment providers. The laudable and related goals of maximizing worker health and productivity, in short, cannot be separated from the obligations of health care professionals to provide their patients with their informed and considered judgments about appropriate courses of treatment, or the interests of patients “in making intimate personal decisions about an appropriate course of medical treatment . . . without undue intrusion or interference from [an] employer.” *Pettus*, 49 Cal. App. 4th at 458.

It would be extraordinary enough if State law permitted private employers to punish workers for taking actions off-duty that State law expressly encourages—but it is all the more so in this case, given that the “conduct” at issue (1) involves obtaining beneficial *medical treatment* and, by virtue of that fact, (2) implicates the fundamental right of medical self-determination enshrined in State law.

[E]mployers do not have a cognizable interest in dictating a course of medical treatment for employees who suffer nonindustrial injuries. That is a matter for the employees to decide, in consultation with their own health care providers—medical professionals who have their patients' best interests at heart.

Id. at 446. As the *Pettus* court observed, “no law or policy . . . suggests that a person forfeits his or her right of medical self-determination by entering

into an employment relationship Indeed, it would be unprecedented to hold that an employer may dictate to an employee the course of medical treatment he or she must follow, under pain of termination” *Id.* at 459.

The Third District Court of Appeal’s decision in the *Ross* case, by contrast, confers upon employers the plenary power to compel workers with disabilities to choose between employment opportunity and medical treatment—without any inquiry as to whether their adherence to the physician-recommended course of treatment would burden the employer in any way. Because that ruling, and the policy of Respondent RagingWire which it upholds, are incompatible with fundamental principles of law and public policy, the decision below should be set aside.

II. RELIABLE RESEARCH AND CLINICAL EXPERIENCE PROVIDE SOUND EVIDENCE THAT MARIJUANA IS A PROPER, MEDICALLY SANCTIONED TREATMENT FOR CHRONIC PAIN AND OTHER SERIOUS MEDICAL CONDITIONS

The State of California has itself expressly recognized the real and substantial health benefits that marijuana can provide seriously ill individuals – and that judgment, in turn, is supported by a large and growing body of medical and scientific research. For a significant number of patients, clinical experience and research confirm that marijuana serves as the only effective medicine for relieving pain, suppressing nausea or stimulating appetite. Numerous studies by blue-ribbon government panels and federally funded, peer-reviewed scientific studies have consistently found that marijuana is effective for treating certain debilitating symptoms. Additionally, scientific studies have established that marijuana’s side-effects are often less severe than those of drugs currently approved for treating the same ailments. *See, e.g., Conant*, 309 F.3d at 640-43 (Kozinski, J., concurring) (summarizing the medical evidence supporting limited medical use of marijuana). Not surprisingly, to date, 26

states have recognized the benefits of cannabis in some form.² Even the federal government allows a limited number of patients suffering from various ailments to use medical marijuana grown at the University of Mississippi and provided by National Institute on Drug Abuse (NIDA). These patients are able to achieve a higher quality of life, and some are able

² Nine States have enacted laws allowing medical use of cannabis. *See* Alaska Stat. §§ 11.71.090, 17.37.010 *et seq.* (Michie 2003); Cal. Health & Safety Code § 11362.5 (West Supp. 2004); Colo. Const. Art. 18, § 4; Haw. Rev. Stat. Ann. § 329-121 *et seq.* (Michie Supp. 2003); Me. Rev. Stat. Ann. tit. 22, § 2383-B (West 2004); Nev. Rev. Stat. Ann. § 453A.200 (Michie Supp. 2003); Or. Rev. Stat. §§ 475.300-.346 (2003); Vt. Stat. Ann. tit. 18 § 4272 *et seq.* (2004); Wash. Rev. Code Ann. §§ 69.51.010-.080 (West 2004).

Five additional States have enacted laws recognizing the therapeutic benefits of cannabis but authorize use only by prescription, *see* Ariz. Rev. Stat. § 13-3412.01 (West 2004); La. Rev. Stat. Ann. § 40:1201 (West 2003); N.H. Rev. Stat. Ann. § 318-B:10(VI) (2003); Va. Code Ann. § 18.2-251.1 (Michie 2003), or classify cannabis as having “currently accepted medical uses,” *see* Iowa Code §§ 124.205, 124.206(7)(a) (West 2003).

Two additional States have passed resolutions urging the federal government to allow the medical use of cannabis. *See* Mo. Sen. Con. Res.14 (1994); N.M. Sen. Memorial 42 (1982), *available at* <<http://www.sumeria.net/nmcu/memorial.html>>.

Seven additional States have enacted laws recognizing cannabis's potential medical benefits for persons suffering from conditions including cancer, nausea, and glaucoma, and establishing therapeutic research programs for the benefit of such persons. *See* Ala. Code § 20-2-111 *et seq.* (1979); Ga. Code Ann. §§43-34-120 *et seq.* (1980); 720 Ill. Comp. Stat. 550/11 (1971); Mass. Gen. Law Sch. 94D, §§ 1-3 (1991); N.Y. Pub. Health Law §§ 3328(4), 3397-a to 3397-f (1980); Minn. Stat. § 152.21 (1980); S.C. Code Ann. §§ 44-53-620 *et seq.* (1980).

The courts of two additional States have allowed cannabis patients to raise a necessity defense to charges of marijuana possession. *See Sowell v. State*, 738 So.2d 333, 334 (Fla. Dist. Ct. App. 1998); *State v. Hastings*, 801 P.2d 563, 565 (Idaho 1990). A third State recently limited the penalty for possessing cannabis for medical purposes to a \$100 fine. *See* Md. Code Ann., Crim. Law Art. 5-601(c)(3).

to maintain gainful employment, as a result of the federal government providing them with the medicine they need.³

A. Marijuana Is An Effective Pain-Killer

The goal of pain management is to enable patients to function as fully as possible—“enabling individuals to work, attend school, or participate in other day-to-day activities.”⁴

Marijuana plays an undeniable role in the pain physician’s armamentarium, along with many other medications. Americans consume over 10,000 tons of over-the-counter pain medications, such as aspirin, acetaminophen, ibuprophen, naproxen sodium and others each year. These medications work relatively well for mild pain. However, daily, prolonged

³ NIDA currently supplies cannabis to several patients under single patient so-called ‘compassionate use’ Investigational New Drug Applications. In 1978, as part of a lawsuit settlement by the Department of Health and Human Services, NIDA began supplying cannabis to certain seriously ill patients. The federal government cultivated, processed, packaged and shipped the marijuana to these patients. In 1992 the Secretary of Health and Human Services closed the program to new patients, but ordered NIDA to continue supplying those patients already receiving federal cannabis. Seven of these patients survive and continue to receive regular shipments of federal medical marijuana. *See Conant*, 309 F.3d. at 648-649 (Kozinski, J., concurring) (Appendix to decision). *See also* National Institute on Drug Abuse, U.S. Department of Health & Human Services, *Provision of Marijuana and Other Compounds For Scientific Research - Recommendations of The National Institute on Drug Abuse National Advisory Council* (1998) at <<http://www.nida.nih.gov/about/organization/nacda/marijuanastatement.html>>.

⁴ National Institute of Neurological Disorders and Stroke, National Institutes of Health, *Pain: Hope Through Research*, at 5 (2001), available at <http://www.ninds.nih.gov/disorders/chronic_pain/detail_chronic_pain_pr.htm>.

use of over-the-counter medications can cause stomach ulcers, bleeding tendencies, and kidney damage.⁵ Other pain medications, such as opioids, like morphine and codeine, are commonly prescribed for more severe pain. These medications can work extremely well for those with acute pain. However, opiates have drawbacks as a treatment for prolonged, chronic pain. They are potentially lethal and addictive, and they have a high potential for abuse. Additionally, people can develop a tolerance to these medications forcing them to increase their doses with prolonged use. Withdrawal from these medications can be painful and difficult.⁶

While effectively relieving pain, opioids can cause undesirable side-effects. Some patients are left feeling groggy and unable to focus. Opioids frequently cause nausea,⁷ vomiting, dizziness, and hallucinations and can occasionally cause severe constipation. Some patients have an allergic reaction to opiates, indicated by flushing, itching and hives.⁸

There are also a small but significant number of patients who cannot tolerate opioid analgesics or other conventional treatments or their

⁵ Mitch Earleywine, *Understanding Marijuana: A New Look at the Scientific Evidence*, at 172 (Oxford University Press 2002).

⁶ *Id.*

⁷ See, e.g., Am. Med. Ass'n, *Encyclopedia of Medicine* 98 (Charles B. Clayman ed., 1989) ("Nausea [and] vomiting ... may occur with narcotic analgesic drugs."); *The Merck Manual of Diagnosis and Therapy* (Robert Berkow ed., 17th ed. 1999) (same).

⁸ See, e.g., *Physician's Desk Reference* (57th ed. 2003) at 1775 (describing an adverse reaction to Fentanyl, an opioid analgesic). See also Bill Zimmerman, et al., *Is Marijuana the Right Medicine for You?: A Factual Guide to Medical Uses of Marijuana*, at 102-03 (Keats Publishing, Inc. 1989).

accompanying side-effects⁹ For some of these patients, marijuana has proven to be the only effective medicine for relieving pain and nausea. *See, e.g., Conant*, 309 F.3d at pp. 640-43 (9th Cir. 2002) (Kozinski, J., concurring) (summarizing the medical evidence supporting limited medical use of marijuana). The scientific literature and research make clear that there is widespread agreement that marijuana is effective in alleviating pain and other symptoms for many patients who have not obtained relief from conventional treatments.

It is understandable then that many Californians currently manage their pain with the help of physician-recommended marijuana pursuant to California's Compassionate Use Act. (*See* Cal. Health & Safety Code §§ 11352.5 *et seq.*). An estimated 100,000 seriously ill persons in California use medical marijuana pursuant to and in compliance with the Compassionate Use Act.¹⁰ Surveys of Compassionate Use Act patients conducted by the Association for Cannabis Medicine demonstrate that *nearly half* of all Californians who use medical marijuana—45.7 percent—do so under the supervision and with the recommendation of their physicians to treat acute or chronic pain.¹¹ Indeed, the Compassionate Use

⁹ Nathalie Do Quang-Cantagrel, et al., *Opioid Substitution to Improve the Effectiveness of Chronic Noncancer Pain Control: A Chart Review*, 90 *Anesthesia & Analgesia* 933 (2000) (reporting opioid analgesics are effective for only 36% of patients, ineffective for 34% and intolerable for 30% of patients).

¹⁰ Dean E. Murphy, *California Reins In Clinics Using Marijuana for Medical Purposes*, *N.Y. Times*, June 15, 2005.

¹¹ *See Cannabis and Cannabinoids: Pharmacology, Toxicology, and Therapeutic Potential* (Franjo Grotenhermen and Ethan Russo, eds., The Haworth Integrative Healing Press (2002)) (reporting that surveys of 2,480 medical marijuana patients indicated that 45.7 percent of respondents used the drug to treat common pain).

Act expressly intended for “chronic pain” patients to benefit from the Compassionate Use Act’s many protections. (Cal. Health & Safety Code § 11352.5(b)1(A).)

Respected research panels from the United States and Great Britain confirm that cannabis alleviates the symptoms of those who suffer from severe pain. In 1999, a report by the National Institute of Medicine of the National Academy of Sciences (“IOM”)¹² concluded that “[s]cientific data indicate the potential therapeutic value of cannabinoid drugs, primarily THC, for pain relief. . . .” Institute of Medicine, *Marijuana and Medicine: Assessing the Science Base*, (Janet E. Joy, et al., eds., National Academy Press 1999) (“IOM Report”), at 15, 179.¹³ This exhaustive year-long study, which was commissioned by the White House Office of National Drug Control Policy, analyzed relevant scientific literature, scientific workshops, and consultations with biomedical and social scientists before acknowledging that marijuana provides the only alternative for certain people for whom other medicines are ineffective. *Id.* at 10-11, 179.

Great Britain’s House of Lords reached similar conclusions after conducting hearings and taking testimony from leading researchers, clinicians, and patients regarding the medical benefits and drawbacks of cannabis. Select Committee on Science and Technology, House of Lords, Sess. 1997-98, 9th Report, *Cannabis: The Scientific and Medical Evidence*

¹² The IOM was chartered in 1970 by the National Academy of Sciences (“NAS”) to bring professionals in different disciplines together to examine policy matters pertaining to the health of the nation. The IOM furthers NAS’s responsibility to advise the federal government on such issues pursuant to an 1863 congressional charter.

¹³ The complete IOM Report is *available at* <http://www.nap.edu/books/0309071550/html>.

(Nov. 4, 1998) (“Lords Report”).¹⁴ The House of Lords found that “cannabis almost certainly does have genuine medical applications, especially in treating the painful muscular spasms . . . and in the control of other forms of pain.” Lords Report § 8.2 at 41.

Building on this and similar research, Health Canada, the federal agency responsible for helping Canadians maintain and improve their health, promulgated regulations in 2001 that authorize Canadian physicians to recommend and prescribe medical marijuana to persons suffering from severe pain, muscle spasms, and other ailments, who have not found relief from conventional therapies.¹⁵ Canadian government officials, in turn, have undertaken to cultivate and distribute marijuana to qualifying patients.¹⁶

In addition to treating pain commonly associated with musculoskeletal disorders, such as the one suffered by Mr. Ross, cannabinoids have proven particularly effective at treating neuropathic pain. Neuropathic pain is a symptom commonly associated with a variety of illnesses or conditions, including metastatic cancer, HIV/AIDS, multiple sclerosis (MS), and diabetes. Debilitating pain can also be a side effect of

¹⁴ The complete Lords Report is *available at* <<http://www.publications.parliament.uk/pa/ld199798/ldselect/ldscitech/151/15101.htm>>.

¹⁵ Controlled Drugs and Substances Act, *Marihuana Medical Access Regulations: Regulations Amending the Narcotic Control Regulations* (July 4, 2001) (Can.) *available at* <http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hecs-sesc/pdf/marihuana/marihuana-reg_e.pdf>.

¹⁶ Health Canada, *Medical Use of Marihuana*, *available at* <http://www.hc-sc.gc.ca/dhp-mps/marihuana/index_e.html>.

the recommended treatment for many of these conditions.¹⁷ For example, neuropathic pain can be caused by HIV infection or by the drug therapies used to treat it.¹⁸ Conventional treatments have substantial limitations in their effectiveness for relieving neuropathic pain. The absence of more effective and acceptable treatments for neuropathic pain is particularly problematic for certain HIV patients for whom there are no good alternatives to antivirals causing neuropathic pain, either due to drug resistance or other side-effects from alternative drugs.¹⁹

Marijuana has proven to be an effective treatment for chronic pain. The reasonable accommodation by employers of employees' off-duty use of physician-recommended medical marijuana to alleviate suffering—where such use does not impair the employee or otherwise prevent them from carrying out their employment-related duties—would allow a significant number of Californians to remain productive members of the State's workforce and yield myriad benefits that gainful employment

¹⁷ Many of the reverse transcriptase and protease inhibitors commonly prescribed as part of the "AIDS cocktail" cause side-effects including peripheral neuropathy, nausea, and vomiting. *See, e.g., Physician's Desk Reference* (54th ed. 2000) at 889 (Didanosine) and 895 (Stavudine).

¹⁸ *See, e.g.,* David M. Simpson et al., *Selected Neurologic Manifestations of HIV Infection: Dementia and Peripheral Neuropathy, Improving the Management of HIV Disease* (Dec. 1999); Nathalie Do Quang-Cantagrel et al., *Opioid Substitution to Improve the Effectiveness of Chronic Noncancer Pain Control: A Chart Review*, 90 *Anesthesia & Analgesia* 933 (2000) (reporting opioid analgesics are effective for only 36% of patients, ineffective for 34% and intolerable for 30% of patients); Neurologic AIDS Research Consortium, *Peripheral Neuropathy* (2004), available at <<http://www.neuro.wustl.edu/narc/peri-neuropathy.html>> ("Treatment of neuropathic pain...is notoriously difficult. Even narcotics may not fully relieve [it].").

¹⁹ *See* Neurologic AIDS Research Consortium, *supra*.

confers upon individuals, families and society. Conversely, the failure to adequately treat pain can result in tragic consequences, including deep despair and even suicide.²⁰

B. Marijuana Is An Effective Treatment For Other Serious Ailments Suffered By Working Californians.

Research shows medical marijuana to be an effective therapy for other ailments suffered by California workers, including cancer, HIV/AIDS, MS, and epilepsy.

Marijuana affords essential relief to patients suffering from anorexia and wasting syndromes commonly associated with cancer and HIV/AIDS. IOM Report, *supra*, at 157 (cannabinoids could . . . be beneficial for a variety of effects, such as increased appetite, while reducing the nausea and vomiting caused by the protease inhibitors and the pain and anxiety associated with AIDS); Lords Report § 5.15, *supra* at 22.

Similarly, a growing body of research demonstrates that cannabinoids are effective in controlling the debilitating results of MS and spinal cord injuries.²¹ Marijuana provides relief for muscle spasms and bladder dysfunction associated with these ailments. Lords Report §§ 5.19-5.23, at 23. A 1997 survey of British and American MS patients reported that a majority experienced substantial improvements in

²⁰ See Institute of Medicine, *Approaching Death: Improving Quality of Care at the End of Life*, (Marilyn J. Field and Christine K. Cassel, eds., Nat'l Academy Press 1997) at 76, 94.

²¹ See David Baker, et al., *Cannabinoids Control Spasticity and Tremor in a Multiple Sclerosis Model*, 404 *Nature* 117 (Mar. 2, 2000); Lords Report §§ 5.19-5.23, at p. 23. See also Earleywine, *Understanding Marijuana*, *supra*, at 188.

controlling spasticity and pain after ingesting marijuana.²² An extensive neurological study found that herbal cannabis was the *only* available medication that provided relief from both muscle spasms and ataxia (loss of coordination).²³ Finally, clinical experience and emerging research also indicate that marijuana can help control epileptic seizures. Lords Report § 5.31, at 24. Cannabidiol, one of the primary cannabinoids present in the cannabis plant, appears to be particularly beneficial, allowing patients who ingest it at certain times to avoid seizure activity. Some epileptics who cannot tolerate other antiseizure medications have been able to use marijuana to successfully control their seizures, without experiencing debilitating side-effects.²⁴

²² Paul Consroe, et al., *The Perceived Effects of Smoked Cannabis on Patients with Multiple Sclerosis*, 38 *European Neurology* 44 (1997) (reporting 96.5% of subjects with symptoms experienced lessened nighttime spasticity, 95.1% experienced reduced muscle pain, and greater than 70% of subjects reported decreased night leg pain, depression, tremor, anxiety, spasms on walking, leg weakness, trunk numbness, and facial pain).

²³ H.L. Meinch et al., *Effect of Cannabinoids on Spasticity and Ataxia in Multiple Sclerosis*, 236 *J. Neurology* 120 (1989).

²⁴ See Jomar M. Cunha, *Chronic Administration of Cannabidiol to Healthy Volunteers and Epileptic Patients*, 21 *Pharmacology* 175 (1980); *R. v. Parker*, 2000 W.C.B.J. LEXIS 10970, 75 C.R.R. (2d)233, 47 W.C.B.(2d) 116 (July 31, 2001), available at <<http://www.ontariocourts.on.ca/decisions/2000/july/parker.htm>> (“While less is known about the other cannabinoids, the scientific evidence is overwhelming that some of them may have anti-seizure properties. The most promising of these is cannabidiol (CBD). Smoking marijuana is one way to obtain the benefit of CBD and other cannabinoids with anti-seizure properties.”)

C. Medical Marijuana Ameliorates The Harmful Side-Effects Of Conventional Therapies And Medications Associated With These Ailments

Medical marijuana also has an important role to play as an adjuvant therapy, helping improve patients' response to—and even their ability to tolerate—first-line medical interventions. For example, marijuana has been found effective in treating common yet serious side-effects, such as nausea, wasting and pain, induced by many mainstay therapies, including chemo and radiation therapy, and various pharmaceutical medications. Opioid analgesics, including codeine, hydrocodone, oxycodone, propoxyphene, pentazocine, meperidine, morphine, hydromorphone, levodromoran, fentanyl, and methadone, are the most common, and generally the most effective agents used to control pain.²⁵ Yet the nausea-inducing properties of these analgesics, like certain chemotherapies for cancer and HIV/AIDS, are uncontroverted,²⁶ and if left unchecked, can lead to patient malnourishment, anorexia, and a decline in strength so dramatic that some patients would rather discontinue treatment than endure these side-effects.²⁷

²⁵ Joint Statement from 21 Health Organizations and the Drug Enforcement Administration, *Promoting Pain Relief and Preventing Abuse of Pain Medications: A Critical Balancing Act*, available at <<http://www.ampainsoc.org/advocacy/promoting.htm>>.

²⁶ See, e.g., Am. Med. Ass'n, *Encyclopedia of Medicine* 98 (Charles B. Clayman ed., 1989) ("Nausea [and] vomiting . . . may occur with narcotic analgesic drugs."); *The Merck Manual of Diagnosis and Therapy* (Robert Berkow ed., 17th ed. 1999) (same). See also, IOM Report, *supra*, at 151 (observing that patients receiving aggressive chemotherapy have a 20-30% likelihood of experiencing acute emesis").

²⁷ See, IOM Report, *supra*, at 147.

As a result, alleviating these serious side-effects is a critical part of medical practice.²⁸

Many patients have used marijuana to successfully combat these debilitating side-effects. Moreover, a small but significant minority of patients have found marijuana to be the *only* effective medication.²⁹ Consistent with these findings, a 1991 Harvard survey of more than 2,400 oncologists found that over 40 percent of respondents had recommended the use of marijuana for the control of nausea and vomiting to at least one cancer patient.³⁰

Against this backdrop, it would be hard to imagine a rule of law more inimical to the basic purposes of the FEHA than one which conditioned the statute's protections on a disabled individual's rejecting the very treatment capable of making him well enough to return to work. Yet that is precisely the force and effect of the Court of Appeals' decision in this case. Whether afflicted with chronic pain, cancer, HIV, epilepsy, or

²⁸ *Id.*

²⁹ A New York State-sponsored study examined the effects of herbal cannabis on cancer chemotherapy patients who were unresponsive to standard antiemetics and found that 78% responded positively to cannabis. Vincent Vinciguerra et al., *Inhalation Marijuana as an Antiemetic for Cancer Therapy*, N.Y.S.J. Med 525 (Oct. 1988). Several other states have undertaken similar trials with similar results. *See generally*, Richard E. Musty and Rita Rossi, *Effects Of Smoked Cannabis And Oral Delta-O-Tetrahydrocannabinol On Nausea And Emesis After Cancer Chemotherapy: A Review Of State Clinical Trials*, 1 J. Cannabis Therapeutics 29 (2001). *See also* Lords Report, *supra*, § 5.12, at 21 (finding cannabis effective in alleviating acute nausea and vomiting); IOM Report, *supra*, at 153-54, 157.

³⁰ *See* Richard Doblin & Mark Kleiman, *Marijuana as Antiemetic Medicine: A Survey of Oncologists' Experiences and Attitudes*, 9 J. Clin. Oncol. 1314 (1991).

some other medical condition whose debilitating symptoms can be alleviated with medical marijuana, workers are forced to choose between protecting their health and their jobs.

III. REASONABLE ACCOMMODATION OF OFF-DUTY MEDICAL MARIJUANA USE IS CONSISTENT WITH EMPLOYER GOALS OF PRODUCTIVITY AND SAFETY

A. The Side-effects Of Medical Marijuana Are Typically Less Severe Than Those Of Many Conventional Prescription Medications

The preceding sections discuss marijuana's medical efficacy in treating pain and other debilitating symptoms, whether those symptoms result from injury or disease, or are the side-effects of other medical therapies. We now examine the relative safety and side-effects of medical marijuana use.

Marijuana is considered to have a very wide margin of safety.³¹ That is to say, marijuana has fewer and less severe negative side-effects, and is better tolerated by patients, than many traditional prescription pain medications, and unlike many pharmaceuticals, cannot cause death due to overdose.³² As the Institute of Medicine observed after examining a variety

³¹ See *R. v. Parker, supra*, at 48-49 (noting wide margin of safety of, and no evidence of overdose fatality from cannabis). See also Earleywine, *Understanding Marijuana, supra*, at 186-189, 195.

³² See also L. Grinspoon & J. B. Bakalar, *Marihuana as Medicine: A Plea for Reconsideration*, 273 *J. Am. Med. Ass'n* 1875-1876 (1995); *Opinion and Recommended Ruling, Findings of Fact, Conclusions of Law and Decision of Administrative Law Judge In the Matter of Marijuana Rescheduling Petition*, Docket No. 86-22 (Dep't Justice D.E.A., Sept. 6, 1988), at 66 (Administrative Law Judge for the Drug Enforcement Administration concluding, after more than two years of evidentiary

of potential harms associated with the medical use of marijuana, the acute side-effects of marijuana use are within the risks tolerated for many medications.” IOM Report, *supra*, at 126. To be sure, while some patients who use marijuana on a chronic basis may develop mild physiological dependence and experience symptoms of withdrawal, these are minor in comparison to those associated with other medications routinely administered to treat acute injury or illness.³³ The 1999 IOM Report did caution that the smoking of medical marijuana over the long-term may raise health risks associated with smoking generally. More recently, however, a large-scale study conducted at the University of California, Los Angeles Geffen School of Medicine, concludes that regular, heavy smoking of marijuana does *not* lead to an increased risk of lung cancer.³⁴

hearings, that “there is accepted safety for use of marijuana under medical supervision”), *available at*

<<http://www.druglibrary.org/schaffer/library/studies/YOUNG/index.html>>.

³³ IOM Report, *supra*, at 90-91 (stating that compared to tobacco and alcohol, dependence on cannabis is relatively rare and that marijuana withdrawal “has been reported only in a group of adolescents in treatment for substance abuse problems and in a research setting where subjects were given marijuana or THC daily [and then precipitously withdrawn from it].” Even then, the withdrawal symptoms “were short lived” and “[i]n four days they had abated.”) (citing T.J. Crowley, et al., *Cannabis Dependence, Withdrawal, and Reinforcing Effects Among Adolescents with Conduct Symptoms and Substance Use Disorders*, 50 *Drug & Alcohol Dependence* 27-37 (1998)); M. Haney, et al., *Abstinence Symptoms Following Smoked Marijuana in Humans*, 141 *Psychopharmacology* 395 (1999); R. Jones, et al., *Clinical Studies of Tolerance and Dependence*, 282 *Annals of New York Academy of Sciences* 221-239.

³⁴ See Marc Kaufman, *Study Finds No Cancer-Marijuana Connection*, *Washington Post*, May 28, 2006 at A03. See also Lynn Zimmer and John P. Morgan, *Marijuana Myths, Marijuana Fact* 113-15 (The Lindesmith Center, NY 1997) *available at* <<http://www.drugpolicy.org/marijuana/factsmyths>> (questioning claims of

It is indisputable that many traditional medications, properly used, can affect work performance and safety in ways far more serious than off-premises medical marijuana use possibly could. For example, many of the commonly prescribed analgesics, particularly opioids, can produce a wide range of side-effects, from mild to severe.³⁵ Among the most commonly prescribed opioid analgesics include morphine, codeine, oxycodone (OxyContin), propoxyphene (Darvon), hydrocodone (Vicodin), hydromorphone (Dilaudid), Fentanyl, and Meperidine (Demerol). These prescription medications can produce feelings of euphoria, as well as drowsiness, confusion, nausea and marked sedation, including depressed breathing.³⁶ Prolonged use of these drugs can lead to physical dependence and tolerance, meaning one has to take more and more of the medication to obtain the same initial effects. These medications can also lead to addiction – defined as compulsive, uncontrollable drug use in spite of negative

marijuana's purported health risks); Stephen Sidney et al., *Marijuana Use and Cancer Incidence*, 8 *Cancer Cause & Control* 722 (1997).

³⁵ See generally, National Institute on Drug Abuse, U.S. Department of Health & Human Services, *NIDA InfoFacts: Science-Based Facts on Drug Abuse and Addiction* (February 2005), available at <<http://www.drugabuse.gov/Infofacts/Infofaxindex.htm>>.

³⁶ See, e.g., *Physician's Desk Reference*, *supra*, at 3050 (side-effects of Phenergan include sedation, confusion, and occasional nausea; side-effects of Thorazine include suppression of cough reflex, drowsiness, fainting and dizziness upon initial dosing, and occasional muscle spasms); "PDR Health" available at <http://www.pdrhealth.com/drug_info/rxdrugprofiles/drugs/tyl1466.shtml> (side-effects of Tylenol with Codeine include dizziness, light-headedness, nausea, sedation, shortness of breath, vomiting; side-effects of Vicodin include dizziness, light-headedness, nausea, sedation, vomiting; side-effects of OxyContin include constipation, dizziness, drowsiness, dry mouth, headache, itching, nausea, sweating, vomiting, weakness).

consequences.³⁷ While opioid analgesics have rightly been called “miracle drugs” because of their remarkable ability to relieve excruciating pain for more people more quickly and effectively than many other medical interventions, the risks accompanying their use are not inconsequential. According to a National Survey on Drug Use and Health, an estimated 6.3 million persons age 12 and older had abused prescription pain medication in the month prior to being surveyed.³⁸ An estimated 415,000 Americans received treatment for pain reliever abuse in the past year.³⁹

³⁷ National Institute on Drug Abuse, U.S. Dep’t Health & Human Serv., *NIDA InfoFact: Prescription Pain and Other Medications* (June 2006), available at <<http://www.nida.nih.gov/Infofacts/Painmed.html>>

³⁸ Substance Abuse and Mental Health Services Administration, U.S. Dep’t Health & Human Serv., *2004 National Survey on Drug Use and Health*, available at <<http://oas.samhsa.gov/nsduh.htm>>.

³⁹ *Id.* at 6-7. Of course opioid analgesics are far from the only prescription medications commonly used by members of the workforce that have potentially dangerous, even deadly, side-effects. (See, e.g., *Physician's Desk Reference* (57th ed. 2003) at 2964 (Valium (diazepam) is prescribed to manage anxiety disorders, or for the short term relief of anxiety. Possible adverse effects include somnolence, confusion, coma and diminished reflexes.); *Id.* at 2794 (Xanax (alprazolam) is prescribed to treat anxiety disorders, symptoms of anxiety & panic disorders. Possible adverse effects include dependence and withdrawal reactions including seizures.); *Id.* at 2305 (Ritalin (methylphenidate) is prescribed to treat attention deficit disorders. Possible adverse effects include irregular heartbeat, convulsions and hallucinations.). There are an estimated 408,285 to 583,179 emergency room visits each year associated with the use, misuse and abuse of over the counter or prescription pharmaceuticals. Drug Abuse Warning Network, U.S. Dep’t Health & Human Serv., *National Estimates of Drug-Related Emergency Department Visits* (2004) available at <<http://dawninfo.samhsa.gov/files/DAWN2k4ED.htm>>.

In contrast, cannabis is a relatively safe therapeutically active substance. No one has ever died of a cannabis overdose.⁴⁰ The ingestion of marijuana can raise the heart rate, but there is no evidence that this increase poses a risk of cardiac arrest in patients who do not have pre-existing heart problems or who are not otherwise in a high-risk group.⁴¹ Additionally, marijuana shows no indication of having immunosuppressant effects.⁴²

Moreover, the window of impairment for marijuana is relatively brief. As a result, workers, like Mr. Ross, who medicate with marijuana at night, will not have their performance marred at work the next day. Scientific studies do not confirm the presence of a marijuana “hangover.”⁴³

⁴⁰ ALJ Opinion, *supra*, at 56-59. See also, Robert S. Gable, *The Toxicity of Recreational Drugs*, 94(3) American Scientist Online (May-June 2006), available at <<http://www.americanscientist.org/template/AssetDetail/assetid/50773?&print=yes>> (reporting “[t]he least physiologically toxic substances, those requiring 100 to 1,000 times the effective dose to cause death, include . . . marijuana” and noting “no published cases in the English language that document deaths from smoked marijuana”).

⁴¹ See IOM Report, *supra*, at 121.

⁴² See IOM Report, *supra*, at 110; Donald Abrams, *Short Term Effects of Cannabinoids on HIV-1 Infection*, *Annals of Internal Medicine* (August 19, 2003) at 258- 259; Donald Abrams, *Short Term Effects of Cannabinoids on HIV-1 Viral Load*, presented at the 13th International AIDS Conference, Durban, South Africa (July 2000) (the use of cannabis does not adversely affect the immune system of HIV patients taking antiretroviral therapies).

⁴³ L. D. Chait, *Subjective and Behavioral Effects of Marijuana the Morning After Smoking*, 100 *Psychopharmacology* 328-333 (1990) (study of 12 subjects found no evidence of hangover the morning after smoking cannabis in the laboratory); L.D. Chait, et al., ‘*Hangover*’ *Effect The Morning After Marijuana Smoking*, 15(3) *Drug Alcohol Dependence* 229-38 (1985) (study revealing that people felt more functional and energetic the morning after smoking cannabis than those smoking a placebo).

As noted above, the side-effects of many opioid analgesics can be quite pronounced and cause significant impairments, including severe drowsiness, nausea and depressed respiration.⁴⁴ Similarly, Marinol, the synthetic form of THC, can cause a more prolonged and more pronounced “high” than its herbal cousin. Consequently, the use of medical marijuana measures up favorably against several commonly-used pharmaceutical drugs with respect to its relatively minor impairment potential.

B. For Some Patients Prescription Marinol Can Substitute For Medical Marijuana; But The Decision Below Potentially Thwarts Its Use By Working Patients

Marinol, the pharmaceutical brand name of dronabinol, is the synthetic isomer of tetrahydrocannabinol, or “THC,” the main psychoactive ingredient of marijuana. It is sold in pill form and is approved by the Food and Drug Administration for the treatment of nausea, vomiting, appetite loss and anorexia, but doctors also prescribe it for other conditions, such as depression and muscle spasticity.

Marinol has some distinct disadvantages to medical marijuana. For one, because it is a pill some patients seeking relief from severe nausea regurgitate the Marinol pill before it can suppress vomiting. 64 Fed. Reg. 35, 928 (1999). In addition, after being swallowed, Marinol is delivered first to the stomach and then to the liver where it is metabolized into 11-hydroxy-delta-THC. This metabolite is three times more psychoactive

⁴⁴ U.S. Department of Health and Human Services, National Institute of Health Research Report Series, *Prescription Drugs: Abuse and Addiction* (No. 01-4881, 2001) (2005) at 10, available at <<http://www.nida.nih.gov/PDF/RRPrescription.pdf>>.

than THC delivered to the lungs by smoked cannabis.⁴⁵ Therefore, not only must patients who use Marinol wait a considerable period of time to obtain relief, but they also often experience harsh, prolonged psychoactive side-effects from the pill.

By contrast, the therapeutic benefits of smoked marijuana are almost instantaneous, resulting in prompt relief for patients.⁴⁶ Additionally, smoked marijuana has less debilitating psychoactive side-effects than Marinol. This is so because the active agents of smoked marijuana enter the bloodstream so quickly and efficiently, patients are able to titrate the dose of cannabinoids to achieve the desired therapeutic effect without experiencing the same intensity of psychoactive side-effects.⁴⁷

Nevertheless, for patients who obtain relief from THC, Marinol is often a cheaper and more convenient medication to use than medical marijuana. Unlike marijuana, the cost of Marinol is often covered by medical insurance plans. And unlike marijuana, Marinol can be obtained at most pharmacies. What is more, Marinol can be consumed more discreetly

⁴⁵ IOM Report, *supra*, at 36 (citing Raj Razdan, *Structure-activity Relationships in Cannabinoids*, 38 *Pharmacology Rev.* 75-149 (1986)).

⁴⁶ See, e.g., Opening Statement of Stanley J. Watson, Jr., Institute of Medicine News Conference, *Marijuana and Medicine: Assessing the Science Base* (Mar. 17, 1999) (“Smoking ... delivers rapid drug effect, whereas the THC capsule takes effect slowly, and its results are variable. There are many symptoms for which a quick-acting drug is ideal such as pain, nausea and vomiting.”) *available at* <<http://www.4.nationalacademics.org>> (search for "Watson and Marijuana").

⁴⁷ See Lords Report, *supra*, at 178 (“[S]moking ... is actually a very good route of administration, in some ways; it is very effective, there is a very rapid absorption, and the patients have a great deal of control over how much they take. They learn to titrate.”). See also, IOM Report, *supra*, at 203.

than smoked medical marijuana, insulating the patient from unwanted attention.

The relative benefits of Marinol over medical marijuana are noteworthy for the simple reason that had Mr. Ross, the Appellant here, ingested Marinol rather than medical marijuana, he would have tested positive for THC on his employment drug screen—precisely the same result after his use of smoked medical marijuana.⁴⁸ The standard urine tests for cannabinoids are unable to distinguish between the urinary products of smoked cannabis and those of ingested Marinol.⁴⁹

Accordingly, under Respondent RagingWire’s policy, it would appear that employees who used Marinol, an FDA-approved medication, pursuant to a physician’s prescription would be barred from employment along with those who used physician recommended marijuana, simply

⁴⁸ Commonly-used drug tests do not have the capacity to distinguish between FDA approved Marinol and medical marijuana. *See, e.g.*, Lester Grinspoon, MD, *Questions and Answers*, available at <<http://www.rxmarihuana.com/q&a.htm>> (“The standard urine tests for cannabinoids will not distinguish between the urinary products of smoking cannabis and those of ingesting Marinol. There is a test which can distinguish between these two sources, but it is very expensive and is not used in routine screening.”); Marijuana Policy Project, *Marijuana Policy Report*, 20 (Winter/Spring 1999), available at <<http://www.mpp.org/mpr/winspr99.pdf>> (describing ruling of California federal magistrate judge that an experimental new drug test cannot reliably distinguish between marijuana and Marinol); *Andrews v. Exxon Mobile Corp.*, 2004 Tex. App. LEXIS 7786 (Tex. App. 2004) (“Marinol—a drug used to treat nausea resulting from chemotherapy—and is a legal substance that can produce a positive THC test result.”)

⁴⁹ Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, *Mandatory Guidelines for Federal Workplace Drug Testing Programs* (Federal Register: April 13, 2004 (Vol. 69, No. 71)).

because the company would not be able to credibly determine which substance the employee had in fact ingested. The legal implications of an employer firing an employee for using a federally-approved and physician prescribed medication, absent any showing that the employee's job performance is impaired by the medication, are not the focus of this amicus brief. But it is fair to point out that such conduct by an employer would be legally suspect, under state and federal law.

C. Marijuana's Placement As A Schedule I Drug Has No Relation To Its Possible Affect On Workplace Performance

The federal government's decision to classify marijuana as a schedule I drug is not indicative of whether marijuana would in any way interfere with workplace performance. The Controlled Substances Act directs the Drug Enforcement Administration (DEA) to schedule drugs based on eight criteria, none of which include any consideration of a drug's potential to affect a user's workplace productivity. (21 USC 811(c)). Marinol (a synthetic form of THC) is classified as a schedule III controlled substance while marijuana is classified as schedule I—despite the fact that Marinol contains a THC metabolite that is three times more psychoactive than the THC delivered to the lungs by smoked cannabis.⁵⁰ The Supreme Court recently and unanimously recognized that the federal government's scheduling decision does not mean that all individual use is especially dangerous. *See Gonzales v. O Centro Espirita Beneficente Uniao do Vegetal* (2006) 126 S. Ct. 1211.

⁵⁰ Raj Razdan, *Structure-activity Relationships in Cannabinoids*, 38 *Pharmacology Rev.* 75-149 (1986), *cited at* <<http://www.drugpolicy.org/marijuana/medical/challenges/litigators/medical/marinol/briefexerpt.cfm>>.

A review of the legislative history of the Controlled Dangerous Substances Act suggests that the decision to classify marijuana as a schedule I drug was driven by politics rather than medical and scientific evidence. When Congress passed the Act in 1970, little was known about the drug. There was disagreement between law enforcement officials who insisted that marijuana was extremely dangerous and the medical and scientific community, the majority of whom dismissed this notion. Eventually a compromise was reached: the bill was amended to include the establishment of a Presidential Commission on Marijuana and Drug Abuse and marijuana would be temporarily placed in Schedule I pending their fact-finding report. In 1972, the Commission's report, *Marihuana: A Signal of Misunderstanding* was released.⁵¹ The report concluded that there was no evidence that marijuana use leads to physical addiction and that many myths about the drug's dangers had been perpetuated through government propaganda without scientific evidence.⁵² Despite these findings and Commission's recommendation that possession of small amounts of marijuana be decriminalized, DEA officials have refused subsequent efforts to reclassify marijuana.

For these reasons, an employer policy that *per se* excludes persons from the workplace because they use medical marijuana outside of job hours is neither grounded in science or medicine nor readily reconcilable with an employer's legal obligation to reasonably accommodate employees who are undergoing medical treatment and who, as a result of such

⁵¹ The complete report is *available at* <http://www.druglibrary.org/schaffer/library/studies/nc/ncmenu.htm>.

⁵² Charles Whitebread and Richard Bonnie, *The Marijuana Conviction: A History of Marijuana Prohibition in the United States* (The Lindesmith Center, NY 1999).

treatment, are rendered sufficiently fit and safe to effectively perform their employment related duties.⁵³

IV. MEDICINE AND THE LAW BOTH DISTINGUISH BETWEEN THERAPEUTIC DRUG USE AND DANGEROUS DRUG MISUSE / ABUSE

The decision below – and Respondent’s argument – rest on a further, serious fallacy: the assumption that an employer’s power to test for a particular substance is coextensive with its authority to deny employment based on a positive test. As noted above, it would be illegal for an employer to dismiss an employee solely for a positive drug test for THC (a psychoactive compound in marijuana), where the THC derives from doctor-prescribed, FDA-approved and pharmaceutically manufactured Marinol. Likewise, an employer would be legally constrained from terminating an employee for an opioid-positive drug screen where the opioid, be it fentanyl, morphine, or some other opiate derivative, was lawfully prescribed by a physician.

These legal constraints, however, are diminished, where an employer is faced with an employee found to be abusing a controlled substance, even when that substance was prescribed or recommended by a physician and was used initially for strictly therapeutic purposes. But the critical line of demarcation between licit and illicit use, or between medical use and drug abuse, is not laid bare by the results of a workplace drug test. A drug screen, in fact, does nothing more than identify whether an individual has particular metabolites of certain controlled substances lingering in his or

⁵³ See *UAW v. Johnson Controls* (1991) 499 U.S. 187 (fetal dangers from workplace lead exposure do not allow employer to exclude women of childbearing age from jobs involving lead).

her body. A drug screen does not disclose how the metabolite entered the body, whether the substance was ingested lawfully or illicitly—or even *knowingly*.⁵⁴ Nor does a drug screen reveal (for purposes of the employment relationship) whether the ingested substance impaired—or *improved*—the individual’s ability to function effectively in the workplace. In short, the fact that an employer may have a legitimate interest in knowing that a particular employee has ingested a particular substance or even rejecting a job applicant whose positive drug test is indicative of drug abuse, does not establish that the employer may presume, absent additional information, that a “positive” drug screen resulted from drug abuse and fire an employee whose use of the drug was physician-recommended and supervised, as part of a course of treatment for his serious medical condition.

⁵⁴ Consumption of benign substances are known to cause “false positive” drug test results. For example, ingestion of poppy seeds can cause a measurable positive drug screen for codeine and morphine. *See Oregon Medical Laboratories, Workplace Drug Abuse Testing, available at <http://www.omlabs.com/drugtest_2.html#5>*. *See also* the Federal Bureau of Prisons’ Form BP-S291 (52) stating that one condition of prison furlough is that released inmates may not consume poppy seeds because the seeds may produce a positive drug test). Even drug screens considered highly accurate can yield frequent false positive and false negative results. *See* John M. Gleason, *The Credibility of Drug Tests: A Multi-State Bayesian Analysis*, *Indus. & Labor Relations Rev.* (July 1994); Guido Romano, et al., *Hair Testing For Drugs And Abuse: Evaluation Of External Cocaine Contamination And Risk Of False Positives*, 123 *Forensic Science International* 119 (2001) (finding a high risk for false cocaine positives resulting from environmental contamination rather than intentional ingestion); Kate Dolan, et al., *An Overview of the Use of Urine, Hair and Saliva to Detect Drug Use*, 23 *Drug and Alcohol Review* 213 (June 2004) (observing that drug testing accuracy rates for true positives are diminishing as employers increasingly purchase the cheapest available drug testing devices and contract for the most minimal of laboratory reports.)

V. UNDER-TREATED MEDICAL CONDITIONS OF EMPLOYEES, PARTICULARLY PAIN, COSTS EMPLOYERS BILLIONS OF DOLLARS IN EMPLOYEE ABSENTEEISM AND REDUCED PRODUCTIVITY

The preceding sections of this brief describe the various legal, ethical, and practical considerations that arise when employers' decisions intrude upon and distort the physician-patient relationship, as well as the findings in the medical literature and clinical reports regarding the efficacy of marijuana, used alone or in conjunction with other medications, to alleviate suffering without long-lasting or long-term debilitating consequences. This section describes a few of the larger fiscal implications for employers if Respondent's policy were upheld and employees—particularly those suffering from chronic pain—were forced to choose between preserving their health and keeping their jobs.

Untreated and under-treated medical conditions and pain have a dramatic impact on the nation's economy and cost employers and taxpayers billions of dollars annually. Musculoskeletal conditions alone cost the United States' economy more than \$215 billion a year. Arthritis and other rheumatic conditions have an annual economic impact on the nation roughly equivalent to a moderate recession, with a total cost of about 1.1 percent of the gross national product.⁵⁵ One in every seven Americans—36.4 million people—has a musculoskeletal impairment that limits or decreases his or her ability to function fully.⁵⁶ Other conditions left

⁵⁵ Edward Yelin, et al., *Medical Care Expenditures and Earnings Losses of Persons with Arthritis and Other Rheumatic Conditions in the United States in 1997: Total and Incremental Estimates*, 50(7) *Arthritis & Rheumatism* 2317-2326 (2004).

⁵⁶ Allan Praemer, et al., *Musculoskeletal Conditions in the United States, 2nd Edition* (American Academy of Orthopedic Surgeons, 1999).

untreated also cost Americans millions of dollars as well. Untreated sleep disorders cause a loss of productivity and millions of dollars in economic losses.⁵⁷ Untreated mental health conditions also result in millions of dollars of economic loss each year.⁵⁸ Untreated gastroesophageal reflux alone costs employers over \$3,200 per year in lost productivity per employee.⁵⁹ Not surprisingly, treatment for chronic medical conditions results in higher productivity, employment, and money saved at the state and national level.

Under-treated pain has a particularly high price. Pain in the workforce is a major contributor to increased absenteeism, diminished productivity, and greater health care costs. A study published in 2005 in the *Journal of Occupational and Environmental Medicine* examined the effect of pain on corporate employees, and concluded that pain was “a significant contributor to productivity loss.” Harris Allen, et al. *The Burden of Pain on Employee Health and Productivity at a Major Provider of Business Services*, 47(7) J. Occupational & Env’t Med. 658 (2005). The study estimates that afflicted workers lost nearly three and two-thirds workdays over a four week period due to both impaired work performance and absenteeism. *Id.*

⁵⁷ National Center for Sleep Disorders, Institute of Medicine, *Sleep Disorders and Deprivation: An Unmet Public Health Problem* (Harvey R. Colten et al., eds., National Academies Press 2006).

⁵⁸ Magellan Health Services Press Release, Kristin Brunsworth, *Magellan’s Employee Assistance and Managed Behavioral Health Programs Improve Workplace Productivity* (July 14, 2003) available at <<http://www.magellanhealth.com>>.

⁵⁹ Bonnie B. Dean, et al., *The Cost of Gastroesophageal Reflux Disease: It’s What You Don’t See That Counts*, 7(2) J. Managed Care Med. 6-13 (2003).

Under-treated pain also results in missed work days. The Bureau of Labor Statistics reported that, in 2004, musculoskeletal disorders⁶⁰ constituted 32 percent of injuries and illnesses that required absences from work (Bureau of Labor Statistics, United States Department of Labor, *Lost-Worktime Injuries and Illnesses: Characteristics and Resulting Time Away from Work*, 2004 (U.S. Dept. of Labor News 2005) ("BLS Report")).⁶¹ According to the BLS Report, workers suffering from these disorders missed a median of ten days per year away from work.⁶² Decreased productivity and absenteeism create a billion dollar burden on employers and taxpayers. A 2003 study in the *Journal of the American Medicine Association* found that the nationwide cost of lost productivity due to employee pain approached \$61.2 billion.⁶³

Chronic pain, like the lower back pain suffered by Petitioner, is one of the most common afflictions in the workforce, affecting between 75 and 80 million Americans.⁶⁴ One study conducted by the University of California at San Francisco on the costs of musculoskeletal conditions,

⁶⁰ The Bureau of Labor Statistics defines a musculoskeletal disorder as “an injury or disorder of the muscles, nerves, tendons, joints, cartilage, or spinal discs.”

⁶¹ Bureau of Labor Statistics, United States Department of Labor, *Lost-Worktime Injuries and Illnesses: Characteristics and Resulting Time Away from Work*, 2004 (U.S. Dept. of Labor News 2005) available at <www.bls.gov/news.release/osh2.nr0.htm>

⁶² *Id.*

⁶³ Walter F. Stewart, et al., *Lost Productive Time and Cost Due to Common Pain Conditions in US Workforce*, 290 J. Am. Med. Ass’n 2443, 2449 (2003).

⁶⁴ John Krusz, Chronic Pain: New Approaches to Pain Management Lead to Better Lifestyle, Painjournal.net: Clinical Journal of Pain for Healthcare Professionals and Patients, available at <http://www.painjournal.net/new_page_3.htm>.

including back injuries, estimated that the costs of lower employment rates for those unable to work amounted to \$98.2 billion, with an additional \$5.5 billion in earning losses among those employed, for one year alone.⁶⁵ The study concluded that the prevention of work loss should be an important goal of public health policy to reduce the impact of musculoskeletal conditions on the economy.⁶⁶

The effects of pain on California's workforce mirror those on the nation, with decreases in productivity and increases in absenteeism and costs. The Bureau of Labor Statistics reported that in 2002 Californians missed a median of 15 days per year due to musculoskeletal disorders.⁶⁷ Workers suffering from back pain missed a median of 11 days, while those who experienced general soreness, hurt, or pain missed a median of 22 days.⁶⁸

With the devastating effects of pain on California's workforce, effective treatment is essential. In passing the Pain Patient's Bill of Rights in 1997, the California Legislature made effective treatment of pain a statewide priority. *See* Cal. Health & Safety Code § 124960. In doing so, the Legislature recognized both that "inadequate treatment of acute and chronic pain . . . is a significant health problem" and that, in some cases,

⁶⁵ Edward Yelin, et al., *Direct and Indirect Costs of Musculoskeletal Conditions in 1997: Total and Incremental Estimates Revised Final Report*, Centers for Disease Control and Prevention, Report on Project for Aging Studies Branch, (July 2003) at 5.

⁶⁶ *Id.* at 28.

⁶⁷ Bureau of Labor Statistics, U.S. Department of Labor, *Number, Median Days, Incidence Rate and Relative Standard Errors of Nonfatal Occupational Injuries and Illnesses with Days Away From Work Involving Musculoskeletal Disorders By Selected Parts of Body, California, 2002*, available at <www.bls.gov/iif/oshwc/osh/case/ca2002_pob.pdf>.

⁶⁸ *Id.*

“pain management is the most important treatment a physician can provide.” Cal. Health & Safety Code § 124960(b)-(c).

In sum, proper treatment for pain and other chronic conditions is essential not only to an individual’s health, well-being, and livelihood but to the fiscal well-being of our State.

CONCLUSION

For the reasons stated above, the decision of the intermediate court of appeal should be set aside.

Respectfully submitted,

Daniel Abrahamson

Daniel Abrahamson
Tamar Todd
Theshia Naidoo
DRUG POLICY ALLIANCE
819 Bancroft Way
Berkeley, California 94710

Counsel for Amici Curiae

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TABLE OF AUTHORITIES

Cases

<i>Andrews v. Exxon Mobile Corp.</i> , 2004 Tex. App. LEXIS 7786 (Tex. App. 2004)	31
<i>Conant v. Walters</i> (2002) 309 F.3d 629, 646 (9 th Cir.).....	10, 12, 13, 14, 16
<i>Gonzales v. O Centro Espirita Beneficente Uniao do Vegetal</i> (2006) 126 S. Ct. 1211	32
<i>Opinion and Recommended Ruling, Findings of Fact, Conclusions of Law and Decision of Administrative Law Judge In the Matter of Marijuana Rescheduling Petition, Docket No. 86-22 (Dep't Justice D.E.A., Sept. 6, 1988)</i>	24
<i>People v. Mower</i> (2002) 28 Cal.4 th 457.....	10
<i>Pettus v. Cole</i> (1996) 49 Cal. App. 4th 402 (1 st App. Dist)	8, 10, 11, 12
<i>R. v. Parker</i> , 2000 W.C.B.J. LEXIS 10970, 75 C.R.R. (2d)233, 47 W.C.B.(2d) 116 (July 31, 2001).....	21, 24
<i>Sowell v. State</i> , 738 So.2d 333 (Fla. Dist. Ct. App. 1998)	13
<i>State v. Hastings</i> , 801 P.2d 563 (Idaho 1990).....	13
<i>UAW v. Johnson Controls</i> (1991) 499 U.S. 187	34

Statutes

64 Fed. Reg. 35,928 (1999).....	29
Ala. Code § 20-2-111 <i>et seq.</i> (1979)	13
Alaska Stat. §§ 11.71.090, 17.37.010 <i>et seq.</i> (Michie 2003)	13
Ariz. Rev. Stat. § 13-3412.01 (West 2004).....	13
Cal. Bus. & Prof. Code § 2000 <i>et seq.</i>	9
Cal. Health & Safety Code § 11352.5	9, 10, 13, 16, 17
Cal. Health & Safety Code § 124960.....	39

Ga. Code Ann. §§43-34-120 et seq. (1980)	13
Haw. Rev. Stat. Ann. § 329-121 et seq. (Michie Supp. 2003).....	13
Ill. Comp. Stat. 550/11 (1971).....	13
Iowa Code §§ 124.205, 124.206(7)(a) (West 2003).....	13
La. Rev. Stat. Ann. § 40:1201 (West 2003)	13
Mass. Gen. Law Sch. 94D, §§ 1-3 (1991).....	13
Md. Code Ann., Crim. Law Art. 5-601(c)(3).....	13
Me. Rev. Stat. Ann. tit. 22,§ 2383-B (West 2004).....	13
Minn. Stat. § 152.21 (1980)	13
Mo. Sen. Con. Res.14 (1994)	13
N.H. Rev. Stat. Ann. § 318-B:10(VI) (2003).....	13
N.M. Sen. Memorial 42 (1982)	13
N.Y. Pub. Health Law §§ 3328(4), 3397-a to 3397-f (1980).....	13
Nev. Rev. Stat. Ann. § 453A.200 (Michie Supp. 2003).....	13
Or. Rev. Stat. §§ 475.300-.346 (2003).....	13
S.C. Code Ann. §§ 44-53-620 <i>et seq.</i> (1980)	13
Va. Code Ann. § 18.2-251.1 (Michie 2003).....	13
Vt. Stat. Ann. tit. 18 § 4272 et seq. (2004).....	13
Wash. Rev. Code Ann. §§ 69.51.010-.080 (West 2004).....	13

Other Authorities

Donald Abrams, <i>Short Term Effects of Cannabinoids on HIV-1 Infection</i> , <i>Annals of Internal Medicine</i> (August 19, 2003)	28
American Medical Association, <i>Encyclopedia of Medicine</i> 98 (Charles B. Clayman ed., 1989)	15, 22

David Baker, et al., <i>Cannabinoids Control Spasticity and Tremor in a Multiple Sclerosis Model</i> , 404 <i>Nature</i> 117 (Mar. 2, 2000).....	20
Kristin Brunnworth, <i>Magellan’s Employee Assistance and Managed Behavioral Health Programs Improve Workplace Productivity</i> (July 14, 2003).....	37
L. D. Chait, <i>Subjective and Behavioral Effects of Marijuana the Morning After Smoking</i> , 100 <i>Psychopharmacology</i> 328-333 (1990)	28
L.D. Chait, et al., <i>‘Hangover’ Effect The Morning After Marijuana Smoking</i> , 15(3) <i>Drug Alcohol Dependence</i> 229-38 (1985)	28
Paul Consroe, et al., <i>The Perceived Effects of Smoked Cannabis on Patients with Multiple Sclerosis</i> , 38 <i>European Neurology</i> 44 (1997)	21
Controlled Drugs and Substances Act, <i>Marihuana Medical Access Regulations: Regulations Amending the Narcotic Control Regulations</i> (July 4, 2001) (Canada)	18
T.J. Crowley, et al., <i>Cannabis Dependence, Withdrawal, and Reinforcing Effects Among Adolescents with Conduct Symptoms and Substance Use Disorders</i> , 50 <i>Drug & Alcohol Dependence</i> 27 (1998).....	25
Jomar M. Cunha, <i>Chronic Administration of Cannabidiol to Healthy Volunteers and Epileptic Patients</i> , 21 <i>Pharmacology</i> 175 (1980)	21
Bonnie B. Dean, et al., <i>The Cost of Gastroesophageal Reflux Disease: It’s What You Don’t See That Counts</i> , 7(2) <i>J. Managed Care Med.</i> 6-13 (2003)	37
Richard Doblin & Mark Kleiman, <i>Marijuana as Antiemetic Medicine: A Survey of Oncologists’ Experiences and Attitudes</i> , 9 <i>J. Clin. Oncol.</i> 1314 (1991).....	23
Kate Dolan, et al., <i>An Overview of the Use of Urine, Hair and Saliva to Detect Drug Use</i> , 23 <i>Drug and Alcohol Review</i> 213 (June 2004)	35

Mitch Earleywine, <i>Understanding Marijuana: A New Look at the Scientific Evidence</i> (Oxford University Press 2002).....	15, 20
Robert S. Gable, <i>The Toxicity of Recreational Drugs</i> , 94(3) American Scientist Online (May-June 2006).....	28
John M. Gleason, <i>The Credibility of Drug Tests: A Multi-Stage Bayesian Analysis</i> , Indus. & Labor Relations Rev. (July 1994)	35
L. Grinspoon & J. B. Bakalar, <i>Marihuana as Medicine: A Plea for Reconsideration</i> , 273 J. Am. Med. Ass'n 1875-1876	24
Franjo Grotenhermen and Ethan Russo, eds., <i>Cannabis and Cannabinoids: Pharmacology, Toxicology, and Therapeutic Potential</i> The Haworth Integrative Healing Press (2002)	16
M. Haney, et al., <i>Abstinence Symptoms Following Smoked Marijuana in Humans</i> , 141 Psychopharmacology 395 (1999)	25
Institute of Medicine, <i>Approaching Death: Improving Quality of Care at the End of Life</i> , (Marilyn J. Field and Christine K. Cassel, eds., National Academy Press 1997)	20
Institute of Medicine, <i>Marijuana and Medicine: Assessing the Science Base</i> , (Janet E. Joy, et al., eds., National Academy Press 1999)	passim
R. Jones, et al., <i>Clinical Studies of Tolerance and Dependence</i> , 282 Annals of New York Academy of Sciences 221	25
Marc Kaufman, <i>Study Finds No Cancer-Marijuana Connection</i> , Washington Post, May 28, 2006	25
Marijuana Policy Project, <i>Marijuana Policy Report</i> , 20 (Winter/Spring 1999).....	31
H.L. Meinch et al., <i>Effect of Cannabinoids on Spasticity and Ataxia in Multiple Sclerosis</i> , 236 J. Neurology 120 (1989)	21
<i>The Merck Manual of Diagnosis and Therapy</i> (Robert Berkow ed., 17 th ed. 1999)	15
Dean E. Murphy, <i>California Reins In Clinics Using Marijuana for Medical Purposes</i> , N.Y. Times, June 15, 2005	16

Richard E. Musty and Rita Rossi, <i>Effects of Smoked Cannabis and Oral Delta-O-Tetrahydrocannabinol on Nausea and Emesis after Cancer Chemotherapy: A Review of State Clinical Trials</i> , 1 J. Cannabis Therapeutics 29 (2001).....	23
National Center for Sleep Disorders, Institute of Medicine, <i>Sleep Disorders and Deprivation: An Unmet Public Health Problem</i> (Harvey R. Colten et al., eds., National Academies Press 2006).....	37
National Institute of Neurological Disorders and Stroke, National Institutes of Health, <i>Pain: Hope Through Research</i> , (2001)	14
National Institute on Drug Abuse, U.S. Department of Health and Human Services, <i>National Institute of Health Research Report Series, Prescription Drugs: Abuse and Addiction</i> (2005)	29
National Institute on Drug Abuse, U.S. Department of Health & Human Services, <i>NIDA InfoFacts: Science-Based Facts on Drug Abuse and Addiction</i> (February 2005)	26
National Institute on Drug Abuse, U.S. Department of Health & Human Services, <i>Provision of Marijuana and Other Compounds For Scientific Research - Recommendations of The National Institute on Drug Abuse National Advisory Council</i> (1998).....	14
<i>Physician's Desk Reference</i> (54th ed. 2000).....	19, 26
<i>Physician's Desk Reference</i> (57th ed. 2003)	15, 27
Allan Praemer, et al., <i>Musculoskeletal Conditions in the United States, 2nd Edition</i> (American Academy of Orthopedic Surgeons, 1999).....	36
Nathalie Do Quang-Cantagrel, et al., <i>Opioid Substitution to Improve the Effectiveness of Chronic Noncancer Pain Control: A Chart Review</i> , 90 <i>Anesthesia & Analgesia</i> 933 (2000)	16, 19
Raj Razdan, <i>Structure-activity Relationships in Cannabinoids</i> , 38 <i>Pharmacology Rev.</i> 75-149 (1986)	29, 32

Guido Romano, et al., <i>Hair Testing For Drugs And Abuse: Evaluation Of External Cocaine Contamination And Risk Of False Positives</i> , 123 <i>Forensic Science International</i> 119 (2001)	35
Select Committee on Science and Technology, House of Lords, Sess. 1997-98, 9th Report, <i>Cannabis: The Scientific and Medical Evidence</i> (Nov. 4, 1998).....	passim
Stephen Sidney et al., <i>Marijuana Use and Cancer Incidence</i> , 8 <i>Cancer Cause & Control</i> 722 (1997).....	26
David M. Simpson et al., <i>Selected Neurologic Manifestations of HIV Infection: Dementia and Peripheral Neuropathy, Improving the Management of HIV Disease</i> (Dec. 1999).....	19
Walter F. Stewart, et al., <i>Lost Productive Time and Cost Due to Common Pain Conditions in US Workforce</i> , 290 <i>J. Am. Med. Ass'n</i> 2443, 2449 (2003).....	38
United States Department Health & Human Services Drug Abuse Warning Network, <i>National Estimates of Drug-Related Emergency Department Visits</i> (2004)	27
United States Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, <i>Mandatory Guidelines for Federal Workplace Drug Testing Programs</i> , (Federal Register: April 13, 2004 (Volume 69, Number 71).....	31
United States Federal Bureau of Prison's Form BP-S291 (52).....	35
Vincent Vinciguerra et al., <i>Inhalation Marijuana as an Antiemetic for Cancer Therapy</i> , <i>N.Y.S.J. Med</i> 525 (Oct. 1988).....	23
Stanley J. Watson, Jr., Opening Statement, Institute of Medicine News Conference <i>Marijuana and Medicine: Assessing the Science Base</i> (Mar. 17, 1999).....	30
Charles Whitebread and Richard Bonnie, <i>The Marijuana Conviction: A History of Marijuana Prohibition in the United States</i> (The Lindesmith Center, NY 1999).....	33

Edward Yelin, et al., <i>Medical Care Expenditures and Earnings Losses of Persons with Arthritis and Other Rheumatic Conditions in the United States in 1997: Total and Incremental Estimates</i> , 50(7) <i>Arthritis & Rheumatism</i> 2317-2326 (2004)	36
Lynn Zimmer and John P. Morgan, <i>Marijuana Myths, Marijuana Fact</i> 113-15 (The Lindesmith Center, NY 1997).....	25
Bill Zimmerman, et al., <i>Is Marijuana the Right Medicine for You?: A Factual Guide to Medical Uses of Marijuana</i> , (Keats Publishing, Inc. 1989).....	15
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