

KATIE'S LAW: OKLAHOMA'S SECOND PUFF OF MEDICAL MARIJUANA[†]

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"I stopped all radiation. I basically detoxed off all pharmaceuticals. I started eating raw cannabis three times a day in salads. I am illegally healed because I am in Oklahoma."

Juliette Freese, Oklahoma City resident cured of a rare bone cancer.¹

I. INTRODUCTION

Marijuana is everywhere. Marijuana (*Cannabis sativa*) has always been with us and is not leaving any time soon.² Starting at least 3,000 years

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1. Laura Eastes, *Two Grassroots Groups Work to Change State Medical Marijuana Laws*, OKLA. GAZETTE (Sept. 4, 2015), <http://okgazette.com/2015/09/04/cover-story-are-our-states-marijuana-laws-going-up-in-smoke/> [https://perma.cc/7SJD-TSCZ]. Mrs. Freese was told in May 2014 to prepare for the end due to multiple myeloma. *Id.* She started taking medical marijuana daily and stopped taking prescription medicines. *Id.* In March 2015, she was told she was cancer-free. *Id.*

2. See Hampton Sides, *High Science*, NAT'L GEOGRAPHIC, June 2015, at 30, 38; Marty Ludlum & Darrell Ford, *Marijuana Legalization in Washington and Colorado: The Tipping Point in Policy and Practical Implications*, 6 MUSTANG J.L. & LEGAL STUD., 2014 at 37, 38 [hereinafter *Marijuana Legalization*].

ago, people in China and India used cannabis to treat a variety of ailments.³ Today, “marijuana is the most commonly used illegal drug . . . across the United States.”⁴ Ironically, it is more abundant now than prior to President Nixon’s War on Drugs.⁵

Marijuana is safe. Despite much research, there is little evidence of marijuana harming a healthy adult user—a claim that cannot be said of alcohol or tobacco, both of which are perfectly legal.⁶ Despite being illegal under federal law since 1970,⁷ marijuana is in some places “as readily available as alcohol,”⁸ and attitudes toward its use are changing. As opposed to the past, when marijuana was viewed as harmful, “more Americans now perceive that marijuana is harmless.”⁹ The then U.S. Surgeon General, Vivek Murthy, admitted that medical marijuana may help some people.¹⁰

3. Sides, *supra* note 2, at 38; *see also* RICHARD GLEN BOIRE & KEVIN FEENEY, *MEDICAL MARIJUANA LAW* 13–14 (2006) (stating that the Chinese used marijuana for many ailments as early as the third millennium B.C.); Michael Berkey, *Mary Jane’s New Dance: The Medical Marijuana Legal Tango*, 9 *CARDOZO PUB. L. POL’Y & ETHICS J.* 417, 420 (2011); MITCH EARLEYWINE, *UNDERSTANDING MARIJUANA: A NEW LOOK AT THE SCIENTIFIC EVIDENCE* 25–26 & app. (2002) (Timeline for Highlights in the History of Cannabis); Tim Malyon & Anthony Henman, *No Marihuana: Plenty of Hemp*, 88 *NEW SCIENTIST* 433, 433 (1980).

4. Nancy Rumbaugh Whitesell et al., *Marijuana Initiation in 2 American Indian Reservation Communities: Comparison with a National Sample*, 97 *AM. J. PUB. HEALTH* 1311, 1311 (2007).

5. Thomas Nicholson, David F. Duncan, John White & Cecilia Watkins, *Focus on Abuse, Not Use: A Proposed New Direction for US Drug Policy*, 19 *DRUGS* 303, 303 (2012) (describing the antidrug effort as an ineffective and maladaptive policy). *See generally* Tim Dickinson, *A Drug War Truce?*, *ROLLING STONE*, June 25, 2009, at 45 (discussing different approaches to the War on Drugs).

6. *See* Steven B. Duke, *The Future of Marijuana in the United States*, 91 *OR. L. REV.* 1301, 1307 (2013) (“In study after study, decade after decade, researchers have found no reliable evidence that marijuana is a serious threat to the physical or psychological health of a normal, adult user.”).

7. Comprehensive Drug Abuse and Control Act of 1970, Pub. L. No. 91-513, § 202(c)(10), 84 Stat. 1236, 1249 (codified as amended at 21 U.S.C. § 812(c)(10) (2012 & Supp. 2014)).

8. *Cf.* Whitesell et al., *supra* note 4, at 1311 (noting that for young people, particularly on Native American reservations in the United States, marijuana is much easier to acquire than alcohol because of regulated alcohol sales).

9. Jessica Bestrashniy & Ken C. Winters, *Variability in Medical Marijuana Laws in the United States*, 29 *PSYCHOL. ADDICTIVE BEHAVS.* 639, 639 (2015); *see also* Judy A. Rollins, *Pot for Tots: Children and Medical Marijuana*, *PEDIATRIC NURSING*, Mar.–Apr. 2014, at 59, 59 (noting that 85% of Americans support medical marijuana for adults).

10. Sides, *supra* note 2, at 38.

America's current marijuana policy is a failure. Everyone is frustrated with the War on Drugs.¹¹ Incarceration numbers (and costs) have skyrocketed.¹² Individual rights have been curtailed.¹³ Police forces have become more militaristic in response to the violent drug trade.¹⁴ Punishments have increased.¹⁵ Conversely, the demand for marijuana

11. See Maria McFarland Sánchez-Moreno, *Winding Down the War on Drugs*, HARV. INT'L REV., Summer 2015, at 35, 36 (noting that the traditional approach of the War on Drugs has failed with devastating consequences as legalization has increased); Will Dana, 'A Trillion-Dollar Failure,' ROLLING STONE, July 2, 2015, at 38, 38 (trillion-dollar failure is a reference to the War on Drugs); Vanessa Baird, *Legalize Drugs—All of Them*, NEW INTERNATIONALIST, Sept. 2012, at 12, 13–15 (blaming the War on Drugs for causing a “deadly set of ‘unintended consequences’”); Julien Mercille, *Violent Narco-Cartels or US Hegemony? The Political Economy of the ‘War on Drugs’ in Mexico*, 32 THIRD WORLD Q. 1637, 1650 (2011) (asserting that drug treatment is twenty-three times more effective than our War on Drugs); Marty Ludlum & Darrell Ford, *Oklahoma's First Puff of Medical Marijuana*, AM. INT'L J. CONTEMP. RES., Aug. 2012, at 91, 91 [hereinafter *Oklahoma's First Puff*] (“[T]he War [on Drugs] is largely recognized as a complete failure.”).

12. John F. Pfaff, *The War on Drugs and Prison Growth: Limited Importance, Limited Legislative Options*, 52 HARV. J. LEGIS. 173, 173 (2015) (noting that prison population grew approximately 500% during the War on Drugs); Sánchez-Moreno, *supra* note 11, at 36 (stating prisons are “engorged with low-level drug participants,” disproportionately minorities); Eugene Jarecki, *Voting Out the Drug War*, NATION, Dec. 3, 2012, at 5, 6 (describing incarceration rates as “the tragic excesses of America's criminal justice nightmare”); William S. Savage III, *Up In Smoke?*, OKLA. GAZETTE, Sept. 4, 2015, at 4, 4 (quoting Oklahoma City attorney Chad Moody who describes the mass incarceration of drug offenders as the “21st century slave trade”).

13. Cf. Lawrence D. Bobo & Victor Thompson, *Unfair by Design: The War on Drugs, Race, and the Legitimacy of the Criminal Justice System*, 73 SOC. RES. 445, 445–46 (2006) (arguing that while claiming to support rights of freedom and equality, politicians on both sides have eagerly supported punishments that at any other time in history “would be unthinkable” (quoting Michael Tonry, *Rethinking Unthinkable Punishment Policies in America*, 46 UCLA L. REV. 1751, 1751 (1999))).

14. See Sánchez-Moreno, *supra* note 11, at 36–38 (noting that the military has increasingly been involved in the War on Drugs in the United States and particularly in countries such as Colombia and Mexico); Mercille, *supra* note 11, at 1645 (describing the military equipment being used in the War on Drugs in Mexico and the US); Horace A. Bartilow, *Drug Wars Collateral Damage: US Counternarcotic Aid and Human Rights in the Americas*, 49 LATIN AM. RES. REV., no. 2, 2014, at 24, 24 (discussing the “escalation of drug-related violence,” including mass graves and beheadings).

15. See, e.g., ASSOCIATED PRESS, *Oklahoma Senate Oks Life in Prison for Cooking Hash in State*, NEWSOK.COM (Apr. 21, 2011, 9:01 AM), <http://newsok.com/article/3560477> [<https://perma.cc/Z7YS-9QLL>]; cf. Jarecki, *supra* note 12, at 6 (referring to the War on Drugs as “a predatory monster that sustains itself on the mass incarceration of fellow human beings”); Savage III, *supra* note 12, at 4 (quoting marijuana-legalization activist Chris Simunek's claim that mandatory twenty-year sentences for marijuana possession are still common); Steven Nelson, *Police Made One Marijuana Arrest Every*

remains strong, and the supply keeps coming.¹⁶ Despite this failure, the federal government seems unwilling or unable to find an alternative to the War on Drugs.¹⁷

States have attempted their own solutions. As of November 2016, forty-four states and the District of Columbia have legalized some form of medical marijuana;¹⁸ eight states and the District of Columbia have legalized marijuana for recreational use.¹⁹ How can a workable system of selling, regulating, and taxing marijuana develop when the drug is legal at the state level but not the federal? Preemption should solve this legal dispute in favor of the federal government;²⁰ however, the federal policy has been nonenforcement. Consequently, medical marijuana is potentially

42 Seconds in 2012, U.S. NEWS & WORLD REP. (Sept. 16, 2013, 2:42 PM), <http://www.usnews.com/news/articles/2013/09/16/police-made-one-marijuana-arrest-every-42-seconds-in-2012> [<https://perma.cc/G35W-EFFW>] (reporting that every forty-two seconds someone in the United States is arrested for a marijuana-related offense).

16. Mercille, *supra* note 11, at 1638 (pointing out that Mexico's drug crops are in the thousands of acres in production, nearly all headed toward the United States); see also Glen Olives Thompson, *Slowly Learning the Hard Way: U.S. America's War on Drugs and Implications for Mexico*, 9 NORTEAMÉRICA, no. 2, 2014, at 59, 59, 70 (2014) ("According to the U.S. Department of Health and Human Services, drug abuse and dependence as a percentage of the U.S. population in 2010 is essentially the same as it was in 1970 . . .").

17. See, e.g., Denial of Petition to Initiate Proceedings to Reschedule Marijuana, 81 Fed. Reg. 53,688, 53,688 (Aug. 12, 2016). The closest Congress has come was in 2014 when a pro-marijuana provision was slipped into a huge spending bill. See Alex Kreit, *The 2015 Federal Budget's Medical Marijuana Provision: An "End to the Federal Ban on Marijuana" or Something Less than That*, 35 N. ILL. U. L. REV. 537, 537-38 (2015). The provision purported to disallow the Department of Justice from spending money to stop state implementation of medical-marijuana legalization. *Id.* It was hidden inside a 1,603-page spending bill, but the marijuana policy was advisory and lacked the force of law. *Id.*

18. See *State Medical Marijuana Laws*, NAT'L CON. ST. LEGISLATURES (Nov. 9, 2016), <http://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx> [<https://perma.cc/7MFU-MXJY>]; see also *Medical Marijuana*, NORML, <http://norml.org/legal/medical-marijuana-2> [<https://perma.cc/U5Q3-FAFF>]. See *infra* notes 74-82 and accompanying text.

19. These eight states are Alaska, California, Colorado, Maine, Massachusetts, Nevada, Washington, and Oregon. See Ben Gilbert, *4 States Just Voted to Make Marijuana Completely Legal: Here's What We Know*, BUS. INSIDER (Nov. 9, 2016, 8:52 AM), <http://www.businessinsider.com/marijuana-states-legalized-weed-2016-11/#1-massachusetts-1> [<https://perma.cc/524X-SJ93>]; Sarah G. Miller, *3 More States Legalize Recreational Use of Marijuana: How the Map Looks Now*, LIVESCIENCE (Nov. 9, 2016, 4:45 PM), <http://www.livescience.com/56807-recreational-marijuana-california-massachusetts-nevada.html> [<https://perma.cc/JGA7-WDVP>]; see also *infra* notes 91-97 and accompanying text.

20. See Andrew Renehan, Comment, *Clearing the Haze Surrounding State Medical Marijuana Laws: A Preemption Analysis and Proposed Solutions*, 14 HOUS. J. HEALTH L. & POL'Y 299, 299-301 (2014).

the biggest preemption controversy of this generation.

This Article explores Oklahoma's recent and dramatic changes toward medical marijuana. We begin with a brief history of marijuana regulation in the United States, including the tumultuous changes over the past five years. Next, we turn to Oklahoma's first attempt at legalizing medical marijuana. After that, we explore Katie's Law, Oklahoma's second attempt at legalizing medical marijuana, and the future of CBD-oil legislation. Finally, we conclude with a call for similar legal efforts in other states.

II. THE HISTORY OF MARIJUANA IN AMERICA

Marijuana was not always illegal in the United States.²¹ In fact, marijuana and hemp, which are both from the same plant species,²² were considered vital economic crops for the American colonies.²³ Indeed, even George Washington grew hemp at Mount Vernon.²⁴ Despite the sudden media attention, America has a long history of using medical marijuana.²⁵ Jamestown settlers used marijuana.²⁶ Early Americans used marijuana for a variety of medical reasons,²⁷ and “[b]y the late 18th century, early editions of American medical journals recommend[ed] hemp seeds and roots for the treatment of inflamed skin, incontinence and venereal

21. HEMPTECH, INDUSTRIAL HEMP: PRACTICAL PRODUCTS—PAPER TO FABRIC TO COSMETICS 8 (John W. Roulac ed., 1995) (noting that founding fathers such as George Washington and Thomas Jefferson farmed hemp).

22. Here marijuana and hemp are used interchangeably.

23. See HEMPTECH, *supra* note 21, at 8; Robin Lash, Comment, *Industrial Hemp: The Crop for the Seventh Generation*, 27 AM. INDIAN L. REV. 313, 315–16 (2002) (stating colonists were required to grow hemp for its many uses); RICHARD JAY MOLLER, MARIJUANA: YOUR LEGAL RIGHTS 8 (1981).

24. Lash, *supra* note 23, at 314 & n.1; see also Sides, *supra* note 2, at 38; ROBERT DEITCH, HEMP—AMERICAN HISTORY REVISITED: THE PLANT WITH A DIVIDED HISTORY 19 (2003). In fact, part of its name, *sativa*, means “useful.” Lash, *supra* note 23, at 316. For a historical reference, see Letter from George Washington, U.S. President, to Alexander Hamilton, U.S. Sec’y of the Treasury (Oct. 14, 1791). To view a reproduction of the letter, see *LETTER – October 14, 1791 George Washington to Alexander Hamilton*, ANTIQUE CANNABIS BOOK (2d ed.), http://antiquecannabisbook.com/chap04/Virginia/VA_IndHempHA.htm [<https://perma.cc/S7WC-A7CZ>].

25. JACK HERER, THE EMPEROR WEARS NO CLOTHES 9 (11th ed. 2000).

26. Renehan, *supra* note 20, at 301.

27. Christen D. Shepherd, Comment, *Lethal Concentration of Power: How the D.E.A. Acts Improperly to Prohibit Growth of Industrial Hemp*, 68 UMKC L. REV. 239, 248 (1999).

disease.”²⁸

In 1850, marijuana was listed in the *United States Pharmacopoeia* “as a treatment for numerous ailments, including: neuralgia, tetanus, typhus, cholera, rabies, dysentery, alcoholism, opiate addiction, anthrax, leprosy, incontinence, gout, convulsive disorders, tonsillitis, insanity, and excessive menstrual bleeding.”²⁹ By the early twentieth century, pharmaceutical giants such as Eli Lilly sold marijuana (often in liquid form) in the United States.³⁰ Up to the time of alcohol prohibition, marijuana was used as a poor man’s pain reliever.³¹ “‘Marijuana was an integral part of American medicine for over 100 years . . . and was used safely and effectively during that time,’ [according to] Dr. Alan Shackelford, a Harvard-trained physician who prescribes medical marijuana in Colorado.”³²

After the failed attempt at alcohol prohibition, America started a movement toward criminalizing marijuana. States implemented anti-marijuana laws, often with highly charged racial motives.³³ Studies have shown that anti-marijuana laws have been disproportionately applied to minorities, such as Blacks and Hispanics.³⁴ Given some states’ recent

28. Patrick Stack & Claire Suddath, *A Brief History of Medical Marijuana*, TIME (Oct. 21, 2009), <http://www.time.com/time/health/article/0,8599,1931247,00.html> [<https://perma.cc/W3R4-3TDK>].

29. BOIRE & FEENEY, *supra* note 3, at 16.

30. Roger Parloff, *How Pot Became Legal*, FORTUNE, Sept. 28, 2009, at 140, 148.

31. Cf. Peter J. Cohen, *Medical Marijuana: The Conflict Between Scientific Evidence and Political Ideology*, 2009 UTAH L. REV. 35, 40 n.17 (noting that smoking marijuana was often associated with immigrant agricultural workers); *see also* BOIRE & FEENEY, *supra* note 3, at 16.

32. Yardena Schwartz, *The Outsourcing of American Marijuana Research*, NEWSWEEK (Dec. 17, 2015, 12:29 AM), <http://www.newsweek.com/2015/12/25/outsourcing-american-marijuana-research-406184.html> [<https://perma.cc/T633-X8GE>] (stating that from the 1830s to the 1940s marijuana was considered an effective medicine in America).

33. *See* Duke, *supra* note 6, at 1312 (documenting marijuana’s racially charged history and drug enforcement’s disproportional impact on minority populations); *cf.* David F. Musto, *Opium, Cocaine and Marijuana in American History*, SCI. AM., July 1991, at 40, 45–46 (reporting that smoking of cannabis leaves was introduced to the United States by Mexican agriculture workers and became associated with jazz musicians).

34. *See* Ekow N. Yankah, *A Paradox in Overcriminalization*, 14 NEW CRIM. L. REV. 1, 3 (2011); *accord* Barack Obama, Commentary, *The President’s Role in Advancing Criminal Justice Reform*, 130 HARV. L. REV. 811, 819 & n.32 (2017); Andrew Golub et al., *The Race/Ethnic Disparity in Misdemeanor Marijuana Arrests in New York City*, 6 CRIMINOLOGY & PUB. POL’Y 131, 145–46 & tbl.1 (2007) (reporting disparate arrest rates for blacks and Latinos for marijuana possession in New York City from 1980 to 2003).

legalization of marijuana, scholar Michelle Alexander notes the irony: For decades poor black men went to prison for selling pot, now white men will “get rich doing the same thing.”³⁵

The federal government's first action, in 1937, was to set high taxes on marijuana.³⁶ The high taxes (over 100% of market prices) and significant fines for avoiding taxes (100 times the market price) were meant to discourage use.³⁷ Then, in the 1950s, marijuana was criminalized on a larger scale.³⁸ This effort was ramped up under Richard Nixon, culminating with the Controlled Substances Act in 1970,³⁹ which made marijuana illegal in all states and for all uses.⁴⁰

A. The First Federal Program

Federal law prohibited all possession and use of marijuana,⁴¹ and that was the end of the discussion, almost. While the federal government as a whole preached law and order, and destruction of the evil weed, a portion of the federal government moved in the opposite direction. “In 1978, [the] FDA created the Investigational New Drug . . . Compassionate Access Program” (CIND).⁴² The CIND program allowed a small number of highly screened patients to receive free marijuana from the federal government.⁴³

35. Saki Knafo, *White Men Getting Rich from Legal Weed Won't Help Those Harmed Most by Drug War*, HUFFINGTON POST (Mar. 7, 2014), http://www.huffingtonpost.com/2014/03/06/michelle-alexander-drug-war_n_4913901.html [https://perma.cc/7ASH-V93V].

36. See Stack & Suddath, *supra* note 28; Marihuana Tax Act of 1937, Pub. L. No. 75-238, ch. 553, 50 Stat. 551 (repealed 1970).

37. HERER, *supra* note 25, at 31.

38. Stack & Suddath, *supra* note 28.

39. Comprehensive Drug Abuse Prevention and Control Act of 1970, Pub. L. No. 91-513, tit. II, 84 Stat. 1236, 1242 (codified as amended at 21 U.S.C. §§ 801–904 (2012)) (Title II of this act is known as the Controlled Substances Act (CSA)).

40. See 21 U.S.C. §§ 813(c)(c)(10), 841(a), 844(a) (2012).

41. *Gonzales v. Raich*, 545 U.S. 1, 27 (2005) (“The CSA designates marijuana as contraband for *any* purpose . . .”).

42. MARK EDDY, CONG. RESEARCH SERV., RL33211, MEDICAL MARIJUANA: REVIEW AND ANALYSIS OF FEDERAL AND STATE POLICIES 8 (2010).

43. *Id.* See generally Michael Eisenstein, *Showdown at the Cannabis Corral*, 525 NATURE S15, S16 (Sept. 24, 2015) (stating that the free federal marijuana is grown at a research facility at the University of Mississippi); Marty Ludlum & Darrell Ford, *Colorado's 2010 Update to the Medical Marijuana Law: Three Problems, Three Solutions*, 2 MUSTANG J.L. & LEGAL STUD., 2011, at 73, 74 [hereinafter *Colorado's 2010 Update*] (explaining the research facility at the University of Mississippi was the only provider in the nation that provided legal marijuana); Schwartz, *supra* note 32, at 49 (the National

The program was not publicized, even among medical circles.⁴⁴ Most taxpayers have no idea they simultaneously fund prisons for marijuana sellers and free marijuana for medical users.⁴⁵

The CIND program stopped accepting new patients in 1991,⁴⁶ largely because of the dramatically growing number of AIDS patients seeking marijuana and because of media attention of the program.⁴⁷ However, the program was not halted. Currently, a handful of the original CIND patients survive, each getting monthly shipments of free marijuana from the federal government.⁴⁸

While the federal government stealthily implemented its CIND program, some states, in their roles as the laboratories of democracy, also tried small medical-marijuana programs.⁴⁹ New Mexico was the first state to start a medical-marijuana program in 1978.⁵⁰ Forty-three states and the District of Columbia have since followed New Mexico's lead and legalized some form of medical marijuana.⁵¹ The FDA approved a synthetic form of marijuana, dronabinol,⁵² "marketed under the name

Institute on Drug Abuse runs the program).

44. See Michael Mayo, *Fort Lauderdale Stockbroker 'Living Proof' Medical Marijuana Works*, SUNSENTINEL (Dec. 14, 2013), http://articles.sun-sentinel.com/2013-12-14/news/fl-medical-marijuana-mayocol-b121513-20131214_1_irvin-rosenfeld-medical-marijuana-medical-use [<https://perma.cc/HB48-ZJ72>].

45. *Id.*

46. Michael Isikoff, *HHS to Phase Out Marijuana Program: Officials Fear Sending 'Bad Signal' by Giving Drug to Seriously Ill*, WASH. POST, June 22, 1991, at A14 (during George H.W. Bush's administration).

47. See Pete Guither, *Irvin Rosenfeld and the Compassionate IND – Medical Marijuana Proof and Government Lies*, DRUGWARRANT.COM (Feb. 18, 2005), <http://www.drugwarrant.com/articles/irvin-rosenfeld-and-the-compassionate-ind/> [<https://perma.cc/ZD26-39TB>].

48. Parloff, *supra* note 30, at 142, 152 (fewer than ten of the original patients are still living). The most vocal advocate and patient from the program is Irvin Rosenfeld, a stockbroker who, since 1982, continues to get his marijuana provided by the U.S. government. Mayo, *supra* note 44. See generally Gardiner Harris, *Researchers Find Study of Medical Marijuana Discouraged*, N.Y. TIMES, Jan. 19, 2014, at A14 (describing the federal government's resistance now to even permitting the research into smoking medical marijuana).

49. Cf. Denise C. Morgan & Rebecca E. Zietlow, *The New Parity Debate: Congress and Rights of Belonging*, 73 U. CIN. L. REV. 1347, 1379 & n.169 (2005) ("[S]tates serving as laboratories of experimentation is a structural strength of federalism.").

50. See BEHAV. HEALTH SERVS. DIV. HEALTH & ENV'T DEP'T, THE LYNN PIERSON THERAPEUTIC RESEARCH PROGRAM: A REPORT ON PROGRESS TO DATE I (1983).

51. *State Medical Marijuana Laws*, *supra* note 18.

52. KAMBIZ AKHAVAN, MARINOL VS. MARIJUANA: POLITICS, SCIENCE, AND POPULAR CULTURE 4–5 (2001), <http://www.drugtext.org/pdf/Cannabis-marijuana-hashisch/marinol->

Marinol,” in 1980.⁵³ Marinol is an FDA-approved form of THC, the active chemical in marijuana.⁵⁴ Since marijuana was now available in pill form, the interest in medical pot waned,⁵⁵ especially after Marinol was moved to Schedule III in 1999.⁵⁶

While Marinol has had some positive results,⁵⁷ it is too early to celebrate. As a pill, Marinol is “difficult for people with nausea and vomiting to swallow.”⁵⁸ And Marinol is much more expensive than marijuana.⁵⁹ Is Marinol the solution for those who desire the medical benefits of marijuana? We don’t know. As Professor Rob MacCoun of Stanford Law School has pointed out, research in medical marijuana has been limited by politics.⁶⁰

Certainly, the proponents of medical marijuana claim a host of benefits from the plant.⁶¹ Neurosurgeon and CNN correspondent Sanjay

vs-marijuana-politics-science-and-popular-culture.pdf [https://perma.cc/5Q4L-WBQV] (discussing dronabinol’s path to FDA approval); GOODMAN & GILMAN’S MANUAL OF PHARMACOLOGY AND THERAPEUTICS 649 (Laurence Brunton et al. eds., 2008) (defining “dronabinol”); see Aaron Roussell, *The Forensic Identification of Marijuana: Suspicion, Moral Danger, and the Creation of Non-Psychoactive THC*, 22 ALB. L.J. SCI. & TECH. 103, 126–27 (2012) (explaining that dronabinol was originally a Schedule II drug, used for various stomach issues for chemotherapy and AIDS patients).

53. Roussell, *supra* note 52, at 127; accord AKHAVAN, *supra* note 52, at 4–5 (stating early distribution and testing of Marinol began in 1980); Bestrashniy & Winters, *supra* note 9, at 639.

54. AKHAVAN, *supra* note 52, at 4.

55. See Gregg A. Bilz, *The Medical Use of Marijuana: The Politics of Medicine*, 13 HAMLIN J. PUB. L. & POL’Y 117, 125 (1992); Renehan, *supra* note 20, at 300.

56. Renehan, *supra* note 20, at 300; see also Rescheduling of the FDA Approved Product Dronabinol from Schedule II to Schedule III, 64 Fed. Reg. 35,928, 35,928–30 (June 8, 1999) (codified at 21 C.F.R. pts. 1308, 1312).

57. See EDDY, *supra* note 42, at 8–9.

58. Mitch Earleywine, Opinion, *Medical Marijuana Benefits*, CBS NEWS (Mar. 5, 2009, 10:01 AM), http://www.cbsnews.com/2100-503823_162-4844665.html [https://perma.cc/CV35-8HEN].

59. A sixty-day supply of Marinol (5 mg. capsules) was priced at \$1454.69 at Drugs.com in February 2017. *Marinol Prices, Coupons and Patient Assistance Programs*, DRUGS.COM, <http://www.drugs.com/price-guide/marinol> [https://perma.cc/E56Z-YLGM]; accord John Whitehall, *The Comforting Myths of Medical Marijuana*, QUADRANT, Oct. 2014, at 38, 44 (“[Dronabinol] was too expensive for general use.”).

60. John Ingold, *‘We’ve Tried it All,’* DENV. POST, Dec. 8, 2014, at 12A (commenting on the onerous regulations that prevent serious researchers from attempting work with marijuana); see also ROBERT J. MACCOUN & PETER REUTER, *DRUG WAR HERESIES* 375–80 (2001) (describing the political resistance to marijuana research, medical or otherwise).

61. Murray Dease, Commentary, *Cannabis Beneficial*, STARPHOENIX (Saskatoon, Sask.), July 31, 2014, at A6.

Gupta has claimed that the American public has been misled into believing that cannabis is harmful.⁶² While the medical research is beyond the scope of this article,⁶³ some research shows that marijuana helps settle the stomachs of chemotherapy patients and others.⁶⁴ Additional research has indicated that marijuana helps regenerate brain cells.⁶⁵

While the benefits of marijuana can be debated within medical circles, it has many practical benefits as a medicine. Marijuana can be administered in many forms, such as smoke, edibles, liquids, or aerosols.⁶⁶ Marijuana is inexpensive, and patients can grow their own in a backyard or closet.⁶⁷ Most importantly, marijuana is safe. History has not recorded a fatal overdose in over 3,000 years of use.⁶⁸

Medical marijuana provides a largely untapped reserve of information. In addition to THC and CBD, marijuana contains “dozens of other cannabinoids.”⁶⁹ But researchers have conducted few studies on these other chemicals.⁷⁰ The best anecdotal evidence is 3,000 years of use. The side effects, such as hunger and disorientation, are mild and predictable, and according to some sources, harmful drug interactions seem nonexistent.⁷¹ For many, the benefits outweigh the harms.

62. *Id.*

63. For an in depth discussion of the medical research on marijuana see Cohen, *supra* note 31.

64. *See, e.g., id.* at 72.

65. *See* Dease, *supra* note 61, at A6; *see also* Wen Jiang et al., *Cannabinoids Promote Embryonic and Adult Hippocampus Neurogenesis and Produce Anxiolytic- and Antidepressant-like Effects*, 115 J. CLINICAL INVESTIGATIONS 3104, 3104 (2005).

66. EDDY, *supra* note 42, at 30; *see also* Elizabeth Bruenig, *The Wonder Drug: The Medical Marijuana Industry's Latest Trend*, NEW REPUBLIC, Nov. 2015, at 19, 20–21 (describing CBD-laced shampoo and similarly infused chewing gum).

67. *See* Marty Ludlum & Darrell Ford, *Medical Marijuana and Employment Discrimination*, 23 S. L.J. 289, 291–92 (2013) [hereinafter *Medical Marijuana*]. The ease of acquiring marijuana has been a burden for the drug-free workplace initiatives. *Id.* at 289.

68. STEVEN B. DUKE & ALBERT C. GROSS, *AMERICA'S LONGEST WAR: RETHINKING OUR TRAGIC CRUSADE AGAINST DRUGS* 51–52 (1993); Sides, *supra* note 2, at 39; *cf.* J. Michael Walker & Susan M. Huang, *Cannabinoid Analgesia*, 95 PHARMACOLOGY & THERAPEUTICS 127, 133 (2002) (“[A]n overdose of Marinol would almost certainly not be lethal”); Sandra P. Welch & Billy R. Martin, *The Pharmacology of Marijuana*, in *PRINCIPLES OF ADDICTION MEDICINE* 249, 260 (Allan W. Graham et al. eds., 3d. ed. 2003) (summarizing research and concluding that “marijuana . . . is still considered by many to be a ‘safe’ drug”).

69. Sue Vorenberg, *THC, CBD, Terpenes? It's the Science of Pot*, COLUMBIAN (Vancouver, Wash.), Aug. 30, 2014, at C1.

70. *See id.*

71. *See* Leo E. Hollister, *Interactions of Marijuana and THC with Other Drugs*, in

Of course marijuana is not all good. Even proponents of medical marijuana acknowledge that the hazards of *smoking* marijuana are as bad, if not worse, than the hazards of smoking cigarettes.⁷² Some sociological research suggests that legalizing medical marijuana leads to more access for recreational users.⁷³ That is difficult to imagine since marijuana is currently omnipresent.

B. Different State Approaches

As of November 2016, forty-four states, the District of Columbia, Guam, and Puerto Rico allow the use of medical marijuana in some form.⁷⁴ This represents a shift in American political opinion, with the majority now favoring legalization.⁷⁵ Marijuana is no longer an East Coast/West

MARIJUANA AND MEDICINE 273 (G.G. Nahas et al., eds. 1999) (noting the lack of reported harmful drug interactions but pointing out a significant lack of published research on the topic and inferring that “[u]sually, such silence indicates that no meaningful interactions have been observed in real life use of marijuana as compared with experimental studies”); Leo E. Hollister, *Interactions of Cannabis with Other Drugs in Man*, in STRATEGIES FOR RESEARCH ON THE INTERACTIONS OF DRUGS OF ABUSE 110–15 (Monique C. Braude & Harold M. Ginzburg eds. 1986) (NIDA Research Monograph No. 68), <https://pdfs.semanticscholar.org/99b6/3a2f6b411f477d807cc6cc68e8556eae8487.pdf#page=117> [https://perma.cc/GTY2-HQN7] (“It does not appear, at least now, that such adverse effects are likely to be associated with unexpected interactions between the active components of cannabis and other drugs.”).

72. See Matthew J. Seamon et al., *Medical Marijuana and the Developing Role of the Pharmacist*, 64 AM. J. HEALTH-SYS. PHARMACY 1037, 1040–41 (2007).

73. See Noelle Crombie, *Medical Marijuana: A Few High-Volume Doctors Approve Most Patients*, OR. LIVE (Dec. 29, 2012, 10:26 AM), http://www.oregonlive.com/health/index.ssf/2012/12/medical_marijuana_a_few_high-v.html [https://perma.cc/G7UZ-8S2L].

74. *State Medical Marijuana Laws*, *supra* note 18; Alexandra Sifferlin, *Puerto Rico Governor Signs Executive Order to Legalize Medical Marijuana*, TIME (May 4, 2015), <http://time.com/3845638/puerto-rico-medical-marijuana/> [http://perma.cc/C5J7-PC59]. The states with some form of medical-marijuana laws are Alabama (CBD only), Alaska, Arkansas, Arizona, California, Colorado, Connecticut, Delaware, Florida, Georgia (CBD only), Hawaii, Illinois, Iowa (CBD only), Kentucky (CBD only), Louisiana (CBD only), Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi (CBD only), Missouri (CBD only), Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina (CBD only), North Dakota, Ohio, Oklahoma (CBD only), Oregon, Pennsylvania, Rhode Island, South Carolina (CBD only), Tennessee (CBD only), Texas (CBD only), Utah (CBD only), Virginia (CBD only), Vermont, Washington, Wisconsin (CBD only), and Wyoming (CBD only). *State Medical Marijuana Laws*, *supra* note 18.

75. Scott Clement, *Legalize It, Poll Shows*, WASH. POST (Apr. 4, 2013), <http://www.washingtonpost.com/blogs/the-fix/wp/2013/04/04/legalize-it-poll-shows> [https://perma.cc/4VMR-JRJ5] (showing that 52% of Americans now support marijuana legalization).

Coast issue. Minnesota legalized medical marijuana in 2014.⁷⁶ Georgia legalized medical marijuana in 2015.⁷⁷ And Arkansas, Florida, and North Dakota legalized it in 2016.⁷⁸ So even the conservative southern states are considering it.⁷⁹

Just one state can have a large impact on marijuana production. The average “indoor and outdoor yields” is approximately “40 grams per square foot per harvest.”⁸⁰ With forty-four states legalizing medical marijuana, the production of marijuana is flourishing.⁸¹

Support for medical marijuana is growing in unlikely places. A majority of American doctors support medical marijuana.⁸² And famously,

76. Zach Kayser, *Dayton Taps Local Doctor for Medical Cannabis Board*, BEMIDJI PIONEER (Bemidji, Minn.) (July 11, 2014, 12:12 AM), <http://www.bemidjipioneer.com/content/dayton-taps-local-doctor-medical-cannabis-board-wyllie-serves-indian-health-service-bemidji> [<https://perma.cc/JBU2-AAVG>]; Rita Rubin, *Many States Have Legalized Medical Marijuana, so Why Does DEA Still Say It Has No Therapeutic Use?*, FORBES (Nov. 16, 2016, 10:32 AM), <http://www.forbes.com/sites/ritarubin/2016/11/16/many-states-have-legalized-medical-marijuana-so-why-does-dea-still-say-it-has-no-therapeutic-use/#77e4190635a1> [<https://perma.cc/2AR7-6DEZ>].

77. Bill Hendrick, *Georgia Governor Signs Medical-Marijuana Bill into Law*, MSNBC (Apr. 16, 2015, 4:54 PM), <http://www.msnbc.com/msnbc/georgia-gov-deal-signs-medical-marijuana-bill-law> [<https://perma.cc/72AM-4GUW>].

78. See *State Medical Marijuana Laws*, *supra* note 18.

79. Christina A. Cassidy, *Medical Marijuana Gains Traction in the Deep South*, BOS. GLOBE (Feb. 10, 2014), <https://www.bostonglobe.com/news/nation/2014/02/10/medical-marijuana-gains-traction-deep-south/HkCvW5aU1MwMOf0zw1mENN/story.html> [<https://perma.cc/4TW7-5LYF>]; see also Hunter Stuart, *These States Are Ready to Break the Marijuana Taboo in the Conservative South*, HUFFINGTON POST (Mar. 27, 2014, 10:33 AM), http://www.huffingtonpost.com/2014/03/27/conservative-south-states-ready-to-break-the-marijuana-taboo_n_5006454.html [<https://perma.cc/6PXR-EHAD>].

80. Jonathan Caulkins et al., *Estimating Adequate Licensed Square Footage for Production*, BOTEC ANALYSIS CORP., http://liq.wa.gov/publications/Marijuana/BOTEC%20reports/5a_Cannabis_Yields-Final.pdf [<https://perma.cc/5L3J-TXLN>].

81. *State Medical Marijuana Laws*, *supra* note 18 (“A total of 28 states, the District of Columbia, Guam and Puerto Rico now allows for comprehensive public medical marijuana and cannabis programs Recently approved efforts in 17 states allow use of ‘low THC, high cannabidiol (CBD)’ products for medical reasons in limited situations or as a legal defense.”). Note that *State Medical Marijuana Laws* *supra* note 18 lists Florida under both categories (comprehensive programs and CBD-only laws), resulting in a total of forty-four states. *Id.*; see *supra* note 74 listing the forty-four states.

82. *More Than Half of Doctors Support National Legalization of Marijuana*, Survey Shows, HUFFINGTON POST (Apr. 2, 2014, 8:27 AM), http://www.huffingtonpost.com/2014/04/02/doctors-medical-marijuana_n_5064782.html [<https://perma.cc/65U3-KS74>]; Donna Fuscaldo, *Survey: 53% of Doctors Support National Legalization of Medical Marijuana*, FOX BUS. (Apr. 29, 2014), <http://www.foxbusiness.com/features/2014/04/29/survey-53-doctors-support-national-legalization-medical-marijuana.html> [<https://perma.cc/65U3-KS74>].

a sitting New York judge uses medical marijuana to alleviate his pain.⁸³

Demand for pot is, well, high. According to a study conducted by ArcView Market Research, “[t]he U.S. market for legal cannabis products grew 74 percent in 2014 to \$2.7 billion, up from \$1.5 billion in 2013.”⁸⁴ The numbers are staggering. The highly competitive pot markets are saturated with sellers. In 2015, it was estimated that Seattle had 103 medical-marijuana dispensaries.⁸⁵ In some areas of California and Colorado, legal marijuana merchants outnumber McDonalds and Starbucks.⁸⁶

Back in 2010, Denver had nearly twice as many marijuana dispensaries as public schools, and that was before it was legalized for recreational use.⁸⁷ The number of marijuana dispensaries in Colorado has grown to nearly 1,000—even though the number of marijuana smokers has not changed.⁸⁸ The change is that now those smokers are not criminals; in fact, by 2015, Denver’s crime rate has fallen by seven percent since legalization.⁸⁹

Medical marijuana is not the only area of growth. Although that use of marijuana remains illegal under federal law,⁹⁰ in the last five years,

perma.cc/J8SQ-2N4D] (“According to a survey by online medical resource WebMD, 69% of doctors and 52% of patients polled say marijuana delivers benefits Among the nearly 1,500 doctors surveyed, 82% of the physicians in favor of medical marijuana were oncologists and hematologists.”).

83. Gustin L. Reichbach, *Opinion, A Judge's Plea for Pot*, N.Y. TIMES (May 16, 2012), <http://www.nytimes.com/2012/05/17/opinion/a-judges-plea-for-medical-marijuana.html> [https://perma.cc/E5CF-6V6R] (“I did not foresee that after having dedicated myself for 40 years to a life of the law . . . my quest for ameliorative and palliative care would lead me to marijuana.”).

84. Michael Pollick, *Two Pot Amendments Could Make the 2016 Ballot*, SARASOTA HERALD-TRIB. (Fla.), Mar. 10, 2015, at A1.

85. Jim Camden, *House Weighs Pot Law Proposals*, SPOKESMAN REV. (Spokane, Wash.), Mar. 6, 2015, at A7.

86. *Colorado's 2010 Update*, *supra* note 43, at 75; Marty Ludlum & Darrell Ford, *Three Lessons from California's Compassionate Use Act*, 7 ACAD. HEALTH CARE MGMT. J., no. 1, 2010, at 69, 73 [hereinafter *Three Lessons*].

87. Whitehall, *supra* note 59, at 43; cf. A.A. Gill, *In Weed We Trust: Denver Is America's Cannabis Capital*, SUNDAY TIMES (London, U.K.), June 28, 2015, at 18, 20 (reporting that in 2015 there were 205 pot retailers in the Denver city limits, but the year before only 19 were in operation).

88. Gill, *supra* note 87, at 20 (adding that “tens of thousands of jobs” depend on this demand).

89. *Id.* at 20, 25.

90. 21 U.S.C. § 812(c)(c)(10) (2012).

Colorado,⁹¹ Washington,⁹² Oregon,⁹³ Alaska,⁹⁴ Maine, Massachusetts, California, Nevada,⁹⁵ and the District of Columbia⁹⁶ have legalized the recreational use of marijuana.⁹⁷ However, the Obama administration had a policy of nonenforcement,⁹⁸ leaving states, pot businesses, and their customers in limbo, experimenting with a program that is explicitly illegal under federal law. At the time of this writing, it is unknown what the new administration's approach will be.

Of course not all states are the same. Absent federal guidance, a state

91. COLO. CONST. art. XVIII, § 16; see also Jack Healy, *Voters Ease Marijuana Laws in 2 States, but Legal Questions Remain*, N.Y. TIMES (Nov. 7, 2012), http://www.nytimes.com/2012/11/08/us/politics/marijuana-laws-eased-in-colorado-and-washington.html?_r=0 [<https://perma.cc/4UPW-6Q5E>]; John Vigorito, Comment, *Creating Constitutional Cannabis: An Individual State's Tenth Amendment Right to Legalize Marijuana*, 46 U. TOL. L. REV. 221, 221–22 (2014) (noting that “55% of voters in Colorado cast ballots in favor of Amendment 64, which legalized possession and cultivation of marijuana”).

92. Initiative Measure No. 502, 63d Leg., Reg. Sess. (Wash. 2012), http://sos.wa.gov/_assets/elections/initiatives/i502.pdf [<https://perma.cc/69LP-2ZAD>]; Vigorito, *supra* note 91, at 222 (Washington's Initiative 502 passed with 56% approval).

93. *November 04, 2014 General Election Results Official Abstract of Votes*, OR. SEC'Y OF ST., <http://sos.oregon.gov/elections/Documents/results/results-2014-general-election.pdf> [<https://perma.cc/5EWN-C2MH>]. Oregon's Measure 91 passed with 56% of the vote. *Oregon Legalized Marijuana Initiative, Measure 91 (2014)*, BALLOTPEdia, [https://ballotpedia.org/Oregon_Legalized_Marijuana_Initiative,_Measure_91_\(2014\)](https://ballotpedia.org/Oregon_Legalized_Marijuana_Initiative,_Measure_91_(2014)) [<https://perma.cc/3GZC-TMDS>].

94. Alaska's Ballot Measure No. 2 - 13PSUM passed with 53% of the vote in 2014. *2014 General Election November 4, 2014 Official Results*, ALASKA DIV. OF ELECTIONS 6 (Nov. 25, 2014, 2:55 PM), <http://www.elections.alaska.gov/results/14GENR/data/results.pdf> [<https://perma.cc/J42J-LSJS>].

95. Gilbert, *supra* note 19.

96. The District of Columbia Ballot Initiative 71 ballot question (the Legalization of Home Cultivation and Possession of Minimal Amounts of Marijuana for Personal Use Act of 2014) passed by a wide margin of nearly 65% on November 4, 2014. *DC Board of Elections and Ethics: Election Results*, D.C. BD. OF ELECTIONS (Dec. 3, 2014, 4:09:50 PM), https://www.dcboee.org/election_info/election_results/2014/November-4-General-Election [<https://perma.cc/Z2ZK-PWWL>].

97. Gilbert, *supra* note 19.

98. Zachary S. Price, *Politics of Nonenforcement*, 65 CASE W. RES. L. REV. 1119, 1133–36 (2015) (noting that declining enforcement is a well-established executive principle; President Obama's nonenforcement policy was just more transparent than most administrations); see also Jacob Sullum, *From Casinos to Cannabis: Indian Tribes Eye Pot Profits*, FORBES (Mar. 12, 2015, 7:11 PM), <http://www.forbes.com/sites/jacobsullum/2015/03/12/from-casinos-to-cannabis-indian-tribes-eye-pot-profits/#52251a011e26> [<https://perma.cc/HM2Z-3E5S>]; Jacqueline Keeler, *Tribal Marijuana Conference: 'A 10-Year Window for Tribes to Capitalize'*, INDIAN COUNTRY (Mar. 2, 2015), <http://indiancountrytodaymedianetwork.com/2015/03/02/tribal-marijuana-conference-10-year-window-tribes-capitalize-159431> [<https://perma.cc/9M8M-E8N2>].

can develop a legal framework for legalizing marijuana. At one extreme is the lax California regulatory model. In 1995, California became the first state post-Marinol to allow medical marijuana.⁹⁹ California's law was marketed as a solution for a small number of terminally ill patients.¹⁰⁰ In practice, it became a de facto legalization of recreational marijuana.¹⁰¹ In 2009, seven years before recreational marijuana was actually legal, California had "between three hundred thousand and four hundred thousand medical-marijuana patients and over seven hundred marijuana [dispensaries]."¹⁰²

State Senator Mike McGuire has suggested that California medical-marijuana laws have been "impotent."¹⁰³ While appearing strict, California's law has had a huge loophole. The law allows for marijuana to be used for "any other illness for which marijuana provides relief."¹⁰⁴ This vague standard allows a person to receive medical marijuana after a brief medical consultation for a number of complaints, including better concentration, more energy, and relaxation.¹⁰⁵ Initial California regulations were "murky"¹⁰⁶ and difficult to apply.¹⁰⁷ To correct these errors, McGuire introduced a bill in 2015 to bring some legitimacy into the system, even if it was "20 years too late."¹⁰⁸ Governor Brown signed the reforms into law October 2015.¹⁰⁹

99. Heesun Wee, *California's High on Its Billion-Dollar 'Green Rush,'* CNBC (July 12, 2016, 4:40 PM), <http://www.cnbc.com/2016/07/12/californias-quest-to-legalize-marijuana-in-the-state.html> [<https://perma.cc/XT3A-HFZL>]; Compassionate Use Act of 1996, CAL. HEALTH & SAFETY CODE § 11362.5 (West 2016).

100. See § 11362.5(b)(1)(A).

101. *Three Lessons*, *supra* note 86, at 69.

102. Kreit, *supra* note 17, at 541.

103. Julie Johnson, *Sen. Mike McGuire Introduces Sweeping Marijuana Bill*, PRESS DEMOCRAT (Santa Rosa, Cal.) (Apr. 21, 2015), <http://www.pressdemocrat.com/news/3832017-181/mcguire-introduces-sweeping-marijuana-bill?artslide=0> [<https://perma.cc/CP7J-FCRW>] (California State Senator Mike "McGuire called California's current medical cannabis regulations 'impotent' and said 'that the state has turned its head on this industry.'").

104. § 11362.5(b)(1)(A).

105. See Whitehall, *supra* note 59, at 41–42 (noting that other listed complaints from Californians included back and neck injuries, sleep disorders, muscle spasms, headaches, depression, anger control, diarrhea, seizures, and itching).

106. Johnson, *supra* note 103.

107. See Norimitsu Onishi, *Marijuana Only for the Sick? A Farce, Some Angelenos Say*, N.Y. TIMES (Oct. 7, 2012), <http://www.nytimes.com/2012/10/08/us/california-fight-to-ensure-marijuana-goes-only-to-sick.html?emc=eta1> [<https://perma.cc/F235-TZ9S>].

108. Johnson, *supra* note 103.

109. S.B. 643, 2015–2016 Leg. (Cal. 2015).

At the other end of the spectrum is New Jersey. While the Garden State allows medical marijuana, it has placed heavy restrictions on all users.¹¹⁰ In New Jersey, a patient must have one of the specified physical ailments, and only approved doctors can recommend medical marijuana.¹¹¹ For example, initially PTSD was not an approved ailment in New Jersey, despite longstanding claims of success from other states.¹¹² New Jersey's law is burdensome on patients, only allowing five dispensaries for the entire state.¹¹³ Additionally, Rutgers University declined an offer from the governor to grow medical marijuana for research.¹¹⁴

New Jersey also makes doctors jump through various hoops before prescribing medical marijuana. Doctors must complete state training and registration programs in order to qualify to recommend medical marijuana to their patients.¹¹⁵ As a result, there are only 362 registered physicians actively prescribing medical marijuana¹¹⁶ out of the 28,464 active physicians in the state.¹¹⁷

C. The Executive Administration

At the federal level, America is currently stuck. Marijuana remains illegal under the Controlled Substances Act, but federal enforcement has

110. New Jersey Compassionate Use Medical Marijuana Act, N.J. STAT. ANN. §§ 24:6I-1 to -16 (West 2016); *see also* Glenn Townes, *Medical Marijuana Comes to New Jersey*, N.Y. AMSTERDAM NEWS, Aug. 16–22, 2012, at 4.

111. *See* Townes, *supra* note 110.

112. Glenn Townes, *Garden State Legalizes Medical Marijuana*, N.Y. AMSTERDAM NEWS, Jan. 14–20, 2010, at 4. *But see* Assembly B. No. 457, 217th Leg., 2016 Sess. (N.J. 2016) (amending New Jersey's medical-marijuana laws to include PTSD).

113. Susan Livio, *N.J.'s 5th Medical Marijuana Dispensary to Open Thursday*, NJ.COM (Oct. 15, 2015, 12:54 PM), http://www.nj.com/politics/index.ssf/2015/10/njs_5th_medical_marijuana_dispensary_to_open_thurs.html [<https://perma.cc/G42M-FP9V>]; Kreit, *supra* note 17, at 541.

114. Mary Beth Marklein, *Colleges See Risk to Easing Pot Bans*, USA TODAY, Mar. 7, 2011, at 3A.

115. *Medicinal Marijuana Program: Physician's FAQ*, N.J. DEP'T OF HEALTH, http://www.nj.gov/health/medicalmarijuana/phy_faqs.shtml [<https://perma.cc/XR2S-KKNB>] (explaining the physician registration process).

116. N.J. DEP'T OF HEALTH, MEDICINAL MARIJUANA PROGRAM 2015 ANNUAL REPORT AND 2015 BIENNIAL REPORT 5, 10 (Mar. 2016), https://www.nj.gov/health/medicalmarijuana/documents/annual_biennial_report2.pdf [<https://perma.cc/SW4N-X7LZ>].

117. *Total Professionally Active Physicians*, HENRY J. KAISER FAM. FOUND. (Sept. 2016), <http://kff.org/other/state-indicator/total-active-physicians/?currentTimeframe=0&selectedRows=%7B%22nested%22:%7B%22new-jersey%22:%7B%7D%7D%7D> [<https://perma.cc/3BTV-C56J>].

slowed because of the Obama administration's political views. Marijuana is still illegal under federal law, but the validity of the states' laws depends on the Obama administration's nonenforcement policy.¹¹⁸

This policy shift started with the Ogden memo in 2009.¹¹⁹ It instructed all U.S. Attorneys to give marijuana possession a lesser priority, especially for individuals complying with a state's medical-marijuana law.¹²⁰ The Ogden memo was not a mandate, nor did it repeal the Controlled Substances Act or amend it in any way. The memo was to encourage (but not require) federal prosecutors to consider state medical-marijuana laws when deciding whether to prosecute.¹²¹ In essence, it was "a guide to the exercise of investigative and prosecutorial discretion."¹²²

The Cole memo followed in 2013.¹²³ By then, several more states had added medical-marijuana programs, and a few were discussing legalizing recreational marijuana.¹²⁴ The Cole memo explained that federal prosecutors should (but were not required to) rely on states enforcing state law unless the "marijuana-related conduct" fell within one of eight "enforcement priorities that are particularly important to the federal government:" (1) keeping marijuana away from minors; (2) preventing sales to criminal enterprises; (3) preventing distribution to states where marijuana is illegal; (4) ensuring "state-authorized marijuana activity" is not a cover for illegal activity; (5) keeping cultivation free of firearms and violence; (6) preventing impaired driving; (7) ensuring marijuana is not grown on public lands; and (8) ensuring marijuana is neither possessed nor used on federal property.¹²⁵ Like the Ogden memo, the Cole memo did not

118. Price, *supra* note 98, at 1133–36; *see also* Sullum, *supra* note 98; Keeler, *supra* note 98.

119. *See* Memorandum from David W. Ogden, Deputy Att'y Gen., U.S. Dep't of Justice, to Selected U.S. Att'ys, Investigations and Prosecutions in States Authorizing the Medical Use of Marijuana (Oct. 19, 2009), <http://www.justice.gov/sites/default/files/opa/legacy/2009/10/19/medical-marijuana.pdf> [<https://perma.cc/XH24-QLQC>].

120. *See id.* at 1–2.

121. *Id.* at 2.

122. *Id.*

123. Memorandum from James M. Cole, Deputy Att'y Gen., U.S. Dep't of Justice, to All U.S. Att'ys, Guidance Regarding Marijuana Enforcement (Aug. 29, 2013), <http://www.justice.gov/iso/opa/resources/3052013829132756857467.pdf> [<https://perma.cc/5YHA-MK2J>] [hereinafter 2013 Memo].

124. *See Timeline of Cannabis Laws in the United States*, WIKIPEDIA, https://en.wikipedia.org/wiki/Timeline_of_cannabis_laws_in_the_United_States [<https://perma.cc/F49G-4ZAJ>].

125. 2013 Memo, *supra* note 123, at 1–2.

repeal the Controlled Substances Act or amend it. The memo just advised (but did not mandate) prosecutors to consider state law when deciding how to use limited government resources.

Neither of these memos had the force of law nor did they repeal or reform federal drug laws. The memos did not prevent existing cases from proceeding. The memos also did not bar prosecutors from filing new cases against marijuana defendants. Instead, the memos identified Controlled Substance Act enforcement priorities and encouraged prosecutors to avoid enforcing federal drug laws against “seriously ill individuals” prescribed marijuana consistent with state laws.¹²⁶ The authors cannot remember any similar requests of federal prosecutors in criminal matters.

In reality, the law has not changed. The Controlled Substances Act is still the law of the land. Possession, manufacture, or transportation of marijuana remains a federal crime.¹²⁷ Nothing has changed except the attitudes of those who enforce the law.

From a marijuana investor’s point of view, this is “rolling the dice.”¹²⁸ Will the current policy of nonenforcement continue under the Trump administration? If not, and the laws are suddenly enforced, participants (merchants and their customers) face grave legal danger.

III. OKLAHOMA’S FIRST ATTEMPT AT MEDICAL MARIJUANA

Into this political context, deep in America’s heartland, Oklahoma joined the marijuana fight. Oklahoma is a small state by population and highly conservative.¹²⁹ Any efforts to legalize marijuana in any form seemed unlikely. Despite the political climate, marijuana use is common in conservative Oklahoma. More than one in ten “Okies” (an estimated 11.28%) has used marijuana in the last year, even with the state’s harsh criminal penalties.¹³⁰ In 2011, Oklahoma’s first attempt at medical

126. *Id.* at 3.

127. 21 U.S.C. § 812(c)(c)(10) (2012).

128. Alysa Landry, *Proceed with Caution: A Warning to Tribes Wanting to Grow Medical Marijuana*, INDIAN COUNTRY TODAY (Feb. 16, 2015), <http://indiancountrytodaymedianetwork.com/2015/02/16/proceed-caution-warning-tribes-wanting-grow-medical-marijuana-159208> [https://perma.cc/8AS3-3C9X].

129. *Most Conservative States 2016*, NEW RESERVE DAILY PRESS (Dec. 2, 2016), <http://thenewrevere.com/2016/12/most-conservative-states-2016/> [https://perma.cc/ZTP7-H9R9].

130. U.S. DEP’T OF HEALTH & HUMAN SERV., 2014-2015 NATIONAL SURVEY ON DRUG USE AND HEALTH 3 tbl.1 (2016), <http://samhda.s3-us-gov-west-1.amazonaws.com/s3fs-public/field-uploads/2k15StateFiles/NSDUHsaePercents2015.pdf> [https://perma.cc/59YC

marijuana (Senate Bill 573) was unsuccessful.¹³¹ Senate Bill 573 too closely resembled California's lax system.¹³² The proposed statute lacked details on the transfer of marijuana, definition of *primary caregiver*, and even the definition of *patient*.¹³³ A viable medical-marijuana law requires precise and unambiguous details. As a result, Senate Bill 573 "was dead on arrival" at the Oklahoma capitol.¹³⁴

To understand Oklahoma's new law, we must understand some of the chemistry of marijuana. Marijuana contains thousands of chemicals, only a few of which have been studied. The most common, delta-9 tetrahydrocannabinol (THC),¹³⁵ was first discovered in 1963 by Israeli scientist Raphael Mechoulam.¹³⁶ THC is the chemical that causes the "euphoria" (makes the user high) that marijuana is known for.¹³⁷

The second-most-researched chemical in marijuana is CBD, or cannabidiol.¹³⁸ CBD causes muscles to relax.¹³⁹ Oklahoma lawmakers investigated allowing patients to use marijuana that is very low in THC and very high in CBD.¹⁴⁰ In other words, users would experience muscle relaxation without any euphoric high. The marijuana is neither smoked nor eaten as in recreational use. Instead, the extracts are concentrated into an oil high in CBD but low in THC, hence the name *CBD oil*.¹⁴¹

In marijuana, CBD and THC work as opposing forces.¹⁴² Through selective breeding, recreational strains of the plant high in THC have low

-AJFB].

131. *Oklahoma's First Puff*, *supra* note 11, at 92.

132. *Id.* at 93–94.

133. *Id.*

134. *Id.* at 92.

135. See DAVID P. WEST, HEMP AND MARIJUANA 7 (1998), <http://www.newheadnews.com/hemp/naihc.hemp.mj.pdf> [<https://perma.cc/3D4A-9TJP>]. The psychoactive effects come from the plant's resin. Alina Bradford, *What is THC?*, LIVE SCI. (Apr. 7, 2015, 11:35 PM), <http://www.livescience.com/24553-what-is-thc.html> [<https://perma.cc/P7KP-QS5P>].

136. Sides, *supra* note 2, at 39 (describing Mechoulam as "the patriarch of cannabis science"); Schwartz, *supra* note 32.

137. Whitehall, *supra* note 59, at 39.

138. Helen Lippman, *Can Medical Marijuana Help Pediatric Patients?*, NEUROLOGY REVS., Dec. 2014, at 1, 1 (describing CBD as a non-psychoactive phytochemical); Bradford, *supra* note 135 (noting that CBD counters the psychoactive effects of THC).

139. Vorenberg, *supra* note 69, at C1.

140. Emily Summars, *A Different Kind of Oil: Legislators Hear of Benefits of Marijuana Compound*, J. REC. (Okla. City, Okla.), Nov. 24, 2014, at 2A; Eastes, *supra* note 1.

141. See Summars, *supra* note 140, at 2A.

142. Bradford, *supra* note 135.

CBD levels, while medical strains high in CBD have low THC content.¹⁴³ CBD is “non-psychoactive and not addictive.”¹⁴⁴ In fact, CBD counters the psychological effects of THC.¹⁴⁵ Marijuana with high CBD levels usually has to be specially grown.¹⁴⁶ Most recreational users want high THC content for a stronger “high” effect and would not desire strains high in CBD (and low in THC).¹⁴⁷ Medical marijuana can contain over twenty percent CBD, while most marijuana on the street has, at most, one percent CBD.¹⁴⁸

IV. KATIE’S LAW IN OKLAHOMA

Katie is a little girl, the niece of Oklahoma State Representative Jon Echols.¹⁴⁹ Katie had “tried everything” to treat her epilepsy.¹⁵⁰ She had taken multiple medications, including some not FDA approved, but none really worked, except to nearly give her kidney failure—not even brain surgery helped.¹⁵¹ Then, in desperation, her parents turned to CBD oil and the fight to legalize it for Katie and children like her.¹⁵² Instead of epilepsy constraining her for a lifetime, it is the hope that CBD will allow Katie to live the life of an ordinary young girl.¹⁵³ The law was named after her and her struggle to obtain needed medication¹⁵⁴ despite a cultural belief that marijuana is solely for recreational use.

143. Vorenberg, *supra* note 69, at C1.

144. Summars, *supra* note 140, at 2A.

145. Tom Ireland, *Cannabis May Help Treat Psychosis*, GUARDIAN WKLY., Nov. 28–Dec. 4, 2014, at 34, 34. *See generally* Craig A. Press, Kelly G. Knupp & Kevin E. Chapman, *Parental Reporting of Response to Oral Cannabis Extracts for Treatment of Refractory Epilepsy*, 45 EPILEPSY & BEHAV. 49 (2015) (studying efficacy of nonpsychoactive CBD for epilepsy treatment); Eastes, *supra* note 1 (quoting Oklahoma Governor Mary Fallin who described the CBD oil used in the Oklahoma pilot program as not intoxicating).

146. Vorenberg, *supra* note 69, at C1.

147. *Id.* at C1.

148. *Id.*

149. Tim Farley, *House Panel Approves Clinical Trials to Benefit Child Seizure Patients*, RED DIRT NEWS (Okla. City, Okla.) (Feb. 4, 2015), <http://www.reddirtreport.com/red-dirt-news/house-panel-approves-clinical-trials-benefit-child-seizure-patients> [https://perma.cc/M3Y3-6WKQ].

150. *Id.*

151. *Id.*

152. *Id.*

153. *See* Eastes, *supra* note 1.

154. *Id.*

The benefits some have experienced from CBD oil appear to be nothing short of miraculous. Dr. Francis Filloux, chief of pediatric neurology at the University of Utah School of Medicine, indicated that CBD oil is a “potential treatment for epilepsy”¹⁵⁵ because it helps combat seizures.¹⁵⁶ Consider Charlotte Figi, a child with Dravet syndrome, a severe form of epilepsy.¹⁵⁷ Charlotte started having seizures at the age of three months.¹⁵⁸ She averaged fifty seizures a day.¹⁵⁹ By age five, she was developmentally far behind other children, not able to walk or talk.¹⁶⁰ She had exhausted all other medical treatments.¹⁶¹ She started treatment with CBD oil and went seven days without a seizure for the first time in her short life.¹⁶² After twenty months on CBD oil, she “has only 2-3 nocturnal . . . seizures per month.”¹⁶³ She is walking and talking and no longer taking any other seizure medicines.¹⁶⁴

For children with Dravet syndrome and similar illnesses, seizures can be fatal.¹⁶⁵ Just “[o]ne seizure can be fatal.”¹⁶⁶ This is particularly true for those individuals resistant to traditional seizure medication, an estimated “25 percent of children and 37 percent of adults.”¹⁶⁷ These children and their families are desperate due to the lack of FDA-approved options.¹⁶⁸ They have tried all available drugs, at substantial cost, and either the drugs failed to reduce seizures or reduced the seizures but left the children nearly

155. Lippman, *supra* note 138, at 1, 31.

156. John Ingold, *Pot Oil Could Open Doors*, DENV. POST, Mar. 30, 2014, at 1B.

157. Edward Maa & Paige Figi, *The Case for Medical Marijuana in Epilepsy*, 55 EPILEPSIA 783, 783 (2014). Charlotte's plight first came to prominence when she “was featured in a 2012 CNN documentary entitled ‘Weed.’” Rollins, *supra* note 9, at 59.

158. Maa & Figi, *supra* note 157, at 783.

159. *Id.*

160. *Id.*

161. *See id.*

162. *Id.* at 784; *see also* Zita Toth, *Altering Rules on Cannabidiol Therapies*, ST. LEGIS., Sept. 2015, at 11.

163. Maa & Figi, *supra* note 157, at 784.

164. *Id.*

165. *See* Whitehall, *supra* note 59, at 41 (stating that in addition to fatal convulsions, “sudden unexpected death” affects six percent of children with Dravet syndrome each year); Summars, *supra* note 140, at 2A.

166. David Wahlberg, *Boy's Seizure Disorder Prompts Bill to Legalize Ingredient in Pot*, WIS. STATE J. (Madison, WI), Mar. 3, 2014, at A1; *accord* Orrin Devinsky, Commentary, *Medical Marijuana Survey & Epilepsy*, 56 EPILEPSIA 7, 8 (2015) (“[M]ortality of severe epilepsy is horrific.”).

167. Summars, *supra* note 140, at 2A.

168. *Id.*

comatose.¹⁶⁹ For patients and their parents who have tried everything else, CBD is their “last hope.”¹⁷⁰

CBD oil was first used to treat children on a large scale in Colorado.¹⁷¹ The findings, while anecdotal, are amazing. In one finding, CBD oil reduced seizures by forty percent.¹⁷² In another, CBD stopped all seizures.¹⁷³ In still another, seizures dropped by ninety-nine percent.¹⁷⁴ The time it takes CBD to be effective, varies. In one case, CBD reduced seizures within two weeks.¹⁷⁵ In another, when the CBD oil was given to a child having a seizure, the seizure “immediately subside[d].”¹⁷⁶ For parents, these are miracle cures. However, by medical standards, they are anecdotes, not clinical trials.¹⁷⁷

Scientific studies would be difficult to accomplish with children as subjects and ethically troubling, since a clinical trial would require giving placebos to some critically ill children. However, these results in Colorado were rays of hope in an otherwise all-too-dark situation. Unfortunately, this left parents with only two choices: sneaking the CBD oil out of Colorado or uprooting their family to move there. These Colorado migrant families feel trapped,¹⁷⁸ labeling themselves “medical marijuana

169. Farley, *supra* note 149.

170. *Id.*

171. *Cf.* John Ingold, *Desperate Journey*, DENV. POST, Dec. 7, 2014, at 1A (describing the medical migration to Colorado many parents have made in a last-ditch effort to save their children with CBD oils); Press, Knupp & Chapman, *supra* note 145, at 49–50 (studying the results of seventy-five children whose epilepsy was treated with CBD oils in Colorado); Tom McLaughlin, *Legislators Weigh CBD Arguments*, NW. FLA. DAILY NEWS, Jan. 10, 2014, at A1 (“In Colorado, . . . strains of the weed rich in CBD and extremely low in THC have been grown and successfully used to treat children.”).

172. Kristen Shanahan, *‘It Gives Us Hope,’ Parents, Lawmakers Push for Legalization of Cannabis Oil in Oklahoma*, NEWSCHANNEL4 (Feb. 11, 2015, 9:23 PM), <http://kfor.com/2015/02/11/it-gives-us-hope-parents-lawmakers-push-for-legalization-of-cannabis-oil-in-oklahoma/> [<https://perma.cc/CL29-PJ5N>].

173. *Id.*; accord Sides, *supra* note 2, at 55; Dana Hertneky, *Senate Votes on ‘Katie’s Bill’ to Allow Trials of CBD Oil in Oklahoma*, NEWSON6 (Apr. 15, 2015, 5:10 PM), <http://www.newson6.com/story/28813926/senate-votes-on-katies-bill-to-allow-trials-of-cbd-oil-in-oklahoma> [<https://perma.cc/9LXD-HNRE>].

174. McLaughlin, *supra* note 171, at A1.

175. Summars, *supra* note 140, at 2A.

176. Eastes, *supra* note 1.

177. Summars, *supra* note 140, at 2A.

178. See Ingold, *supra* note 60, at 1A; Ingold, *supra* note 156, at 4B; Adriana Barton, *Is Medical Marijuana Safe for Kids?*, GLOBE AND MAIL (Nov. 11, 2013, 5:06 PM), <http://www.theglobeandmail.com/life/health-and-fitness/health/is-medical-marijuana-safe-for-kids/article15348595/> [<https://perma.cc/9J7S-K75Y>].

refugees.”¹⁷⁹ As a public policy, the decision whether to treat ill children “should not be determined by one’s ZIP code.”¹⁸⁰

While the benefits of medical marijuana have become public knowledge fairly recently, the findings are not new. Actually, marijuana research goes back to 1843 when British doctor William O’Shaughnessy described how cannabis oil stopped an infant’s convulsions.¹⁸¹ But the criminal stigma prevented many researchers from working with marijuana.¹⁸² Marijuana’s illegal status and the War on Drugs has slowed, if not stopped, most research into the drug.¹⁸³ However, CBD research has been rekindled.¹⁸⁴ Pediatric doctors in a Colorado Children’s Hospital study found that parents for fifty-seven percent of the patients “reported at least some improvement in seizures” from using cannabis extracts.¹⁸⁵ In a separate study, one-third of children with Dravet syndrome became seizure free after three months of CBD-oil therapy.¹⁸⁶ Further clinical research is imperative. Fear of “reefer madness” should not dictate medical policy.¹⁸⁷ And a failure to recognize the desperate state of parents is “foolish at best and dangerous at worst.”¹⁸⁸

Seizure disorders are not the only illnesses for which marijuana treatments have proven effective. Many multiple-sclerosis (MS) patients report benefits from taking medical marijuana.¹⁸⁹ Additionally, marijuana

179. Sides, *supra* note 2, at 54 (describing these families as “medical refugees”).

180. Wahlberg, *supra* note 166, at A7.

181. Sides, *supra* note 2, at 54.

182. See John Hudak, *How Racism and Bias Criminalized Marijuana*, WASH. POST (Apr. 28, 2016), https://www.washingtonpost.com/news/in-theory/wp/2016/04/28/how-racism-and-bias-criminalized-marijuana/?utm_term=.6ead2f17d82a [<https://perma.cc/5LRW-GKPN>].

183. *Id.*

184. See Ingold, *supra* note 60, at 1A.

185. Press, Knupp & Chapman, *supra* note 145, at 50. A third of children saw more than fifty percent reduction in the number of seizures with no side effects from taking cannabis extracts. *Id.*

186. Lippman, *supra* note 138, at 31 (reporting on a study by Dr. Francis Filloux of Utah).

187. Referencing a 1936 film in which high school students try marijuana and “descen[d] into madness due to marijuana addiction.” *Reefer Madness*, WIKIPEDIA, https://en.wikipedia.org/wiki/Reefer_Madness#Derivatives [<https://perma.cc/V22D-8TE2>].

188. Maa & Figi, *supra* note 157, at 785.

189. Kenneth R. Gosselin, *Medical Marijuana: More Patients, More Products, Low Profile*, HARTFORD COURANT (Apr. 19, 2015, 7:31 AM), <http://www.courant.com/business/hc-medical-marijuana-connecticut-six-month-anniversary-20150419-story.html> [<https://perma.cc/T3FD-8WHU>]; cf. Bestrashniy & Winters, *supra* note 9, at 639.

has been used to treat a variety of psychological disorders, such as PTSD.¹⁹⁰ In a real way, “marijuana has given [many patients] a second chance at life.”¹⁹¹

Marijuana is an attractive substitute for expensive medications. Even refined CBD oil can be relatively affordable, at around \$300 per month, far less than some prescription alternatives.¹⁹² Nolan Kane, an evolutionary biologist, describes cannabis as “an embarrassment of riches.”¹⁹³

Katie’s Law¹⁹⁴ is Oklahoma’s first successful attempt at a CBD-oil law.¹⁹⁵ The Oklahoma system is a highly regulated medical program bearing little resemblance to the lax California program.¹⁹⁶ The statute requires that an Oklahoma “medical school [or] its affiliated teaching hospitals” administer the CBD oil.¹⁹⁷ The CBD program must be overseen by the U.S. Department of Health and Human Services,¹⁹⁸ and the producer of CBD must be approved by the U.S. Food and Drug Administration.¹⁹⁹ The statute also allows for a provider from outside the United States so long as they are approved by the FDA.²⁰⁰

190. Kevin Betthausen, Jeffrey Pilz & Laura E. Vollmer, *Use and Effects of Cannabinoids in Military Veterans with Posttraumatic Stress Disorder*, 72 AM. J. HEALTH-SYS. PHARM. 1279, 1283 (2015). While unproven, there are signs medical marijuana may help reduce suicidal tendencies as well. See D. Mark Anderson, Daniel I. Rees & Joseph J. Sabia, *Medical Marijuana Laws and Suicides by Gender and Age*, 104 AM. J. PUB. HEALTH 2369, 2374 (2014) (finding “a strong negative relationship between the legalization of medical marijuana and suicides among young men”).

191. Daniela Altimari, *Parents Seek Pot for Sick Kids: Legislature Considers Changes to Law*, HARTFORD COURANT (Conn.), Mar. 14, 2015, at A1; see also Judy Benson, *Families Testify in Support of Bill to Allow Medical Marijuana Use by Minors*, DAY (New London, Conn.) (May 13, 2015, 5:03 PM), <http://www.theday.com/state-news/20150313/families-testify-in-support-of-bill-to-allow-medical-marijuana-use-by-minors> [https://perma.cc/TV7A-CWQ9].

192. Ingold, *supra* note 156, at 1A. By contrast, most epilepsy drugs cost between \$8,500 and \$11,000 a year. Bruenig, *supra* note 66, at 25.

193. Sides, *supra* note 2, at 57.

194. See Katie’s Law, OKLA. STAT. tit. 63, §§ 2–801 to –805 (Supp. II 2015).

195. Leslie Rangel, *Bill Might Legalize Medical Cannabis in Oklahoma*, NEWSCHANNEL4 (Feb. 3, 2015, 10:16 PM), <http://kfor.com/2015/02/03/bill-might-legalize-medical-cannabis-oil-in-oklahoma/> [https://perma.cc/P2ZH-XVWL].

196. Compare OKLA. STAT. tit. 63, §§ 2–801 to –805 (Supp. II 2015), with *Oklahoma’s First Puff*, *supra* note 11, at 95.

197. OKLA. STAT. tit. 63, §§ 2–801(1), 2–802 (Supp. II 2015).

198. §§ 2–801(1)(b), 2–802.

199. § 2–801(2)(a) to (b).

200. *Id.* § 2–801(2)(a).

The statute requires that the CBD be in liquid form²⁰¹ and must have been tested on animals prior to human trials.²⁰² The oil's THC level must be less than 0.3%.²⁰³ Originally, a "qualifying patient" was required to be eighteen years old or younger.²⁰⁴ A 2016 amendment made adults eligible for the program.²⁰⁵ In addition, the qualifying patient must have one of three conditions: "[(1)] Lennox-Gastaut Syndrome, [(2)] Dravet Syndrome, also known as Severe Myoclonic Epilepsy of Infancy, or [(3)] any other form of refractory epilepsy that is not adequately treated by traditional medicine therapies."²⁰⁶ The physician who wishes to become a "principal investigator" for a clinical trial must regularly treat patients with epilepsy²⁰⁷ and must obtain a license from the U.S. Drug Enforcement Agency.²⁰⁸ Additionally, the principal investigator must be registered with the Oklahoma State Bureau of Narcotics and Dangerous Drugs Control (OBNDD).²⁰⁹ The OBNDD can "inspect and test [all] samples of [CBD oil]."²¹⁰ Clinical trials may only use CBD "from an approved source."²¹¹

The statute provides that persons complying with the law "shall not be subject to arrest, prosecution, or any civil or administrative penalty, including a civil penalty or disciplinary action by a professional licensing board, or be denied any right or privilege, for the use . . . of [CBD]."²¹² To avoid any conflict with criminal laws, Katie's Law also modified Oklahoma's definition of marijuana in the Uniform Controlled Dangerous Substances Act to exclude CBD oil.²¹³

Supporters were quick to point out that Katie's Law was "not a litmus test for medical marijuana."²¹⁴ Katie's Law, in contrast to the prior attempt for medical marijuana, had a great deal of support. Both the Oklahoma

201. *Id.* § 2-801(3).

202. *Id.* § 2-801(2)(b).

203. *Id.* § 2-801(3).

204. *Id.* § 2-801(5).

205. H.B. 2835, 55th Leg., 2d Reg. Sess. (Okla. 2016).

206. *Id.*

207. OKLA. STAT. tit. 63, § 2-802(B) (Supp. II 2015).

208. *Id.* § 2-802(B)(2).

209. *Id.* § 2-802(B)(3).

210. *Id.* § 2-802(F).

211. OKLA. STAT. tit. 63, § 2-803(A)-(B) (Supp. II 2015).

212. OKLA. STAT. tit. 63, § 2-804 (Supp. II 2015).

213. OKLA. STAT. tit. 63, § 2-101(23) (2011 & Supp. II 2015). "Marijuana" under Oklahoma law now does not include CBD that is derived from seeds, stalks, fiber, oil, cake, or industrial hemp. *Id.* Therefore, participants in the clinical trials are specifically excluded.

214. Farley, *supra* note 149.

Medical Association and the Oklahoma Bureau of Narcotics supported the measure.²¹⁵ The *Tulsa World*, one of the state's premier newspapers, supported the CBD-oil plan as well.²¹⁶

Politically, this could have been a challenge. Oklahoma's Republican governor, Mary Fallin, did not support any efforts for marijuana legalization or a broad medical-marijuana program.²¹⁷ However, because of the strict regulation and small chance of abuse, Governor Fallin supported this CBD program.²¹⁸

The bill shot through the legislative process starting with a 7–0 committee vote.²¹⁹ The Oklahoma House then approved the bill 99–2.²²⁰ And the Oklahoma Senate unanimously approved Katie's Law.²²¹ A pilot program “to study CBD to treat children who suffer from epileptic seizures” became law with the Governor's signature on April 30, 2015.²²²

V. FUTURE OF CBD POLICY

Oklahoma is not alone in allowing use of CBD oil. The permitted use of CBD oil is becoming a national trend.²²³ A similar CBD bill passed in Utah in 2014.²²⁴ Missouri's 2014 CBD law had unanimous approval.²²⁵

215. Rangel, *supra* note 195; accord Shanahan, *supra* note 172; Justin Dougherty, *Family Who Inspired “Katie’s Bill” Reacts to its Approval*, NEWS9 (Feb. 11, 2015, 6:02 PM), <http://www.news9.com/story/28087237/family-who-inspired-katies-bill-reacts-to-its-approval>[<https://perma.cc/AW5E-M28Q>]; Dana Hertneky, *Legalizing Non-Intoxicating Cannabis Oil Gaining Momentum at State Capitol*, NEWS9 (Nov. 24, 2014, 5:12 PM), <http://www.news9.com/story/27471971/legalizing-non-intoxicating-cannabis-oil-gaining-momentum-at-capitol> [<https://perma.cc/2HXW-XYAG>].

216. Editorial, *CBD: Limited Use Justified*, TULSA WORLD, Aug. 16, 2014, at A16.

217. Marie Price, *Okla. Gov. Fallin Opposed to Income Tax, Marijuana*, J. REC. LEGIS. REP. Aug. 4, 2011, 2011 WLNR 29243759; *Oklahoma’s First Puff*, *supra* note 11, at 92 (explaining that Oklahoma's first marijuana-related bill in 2011 had virtually no support from either political party and failed to make it out of committee). Fallin remains opposed to any expansion of this medical-marijuana program. See Eastes, *supra* note 1 (indicating she will never support legalization of marijuana for the state).

218. Eastes, *supra* note 1 (reporting that Fallin described CBD oil as “life-saving medicine . . . [for] children in need”).

219. Farley, *supra* note 149.

220. Hertneky, *supra* note 173; accord Shanahan, *supra* note 172.

221. Hertneky, *supra* note 173.

222. Eastes, *supra* note 1. House Bill 2154 became law on April 30, 2015. *Id.*

223. See *State Medical Marijuana Laws*, *supra* note 18; Bruenig, *supra* note 66, at 20.

224. Ingold, *supra* note 156, at 1B.

225. Marie French, *Hemp Extract Bill to Treat Epilepsy Sent to Missouri Governor*, ST. LOUIS POST-DISPATCH, May 2, 2014, at A5.

Currently, seventeen states allow CBD oil.²²⁶ CBD-oil bills recently passed in Tennessee and Montana.²²⁷ CBD is becoming popular even in conservative states, such as Georgia and Texas,²²⁸ and even among “soccer moms.”²²⁹

The state laws have varying levels of restrictiveness. For example, Wisconsin's CBD law, known as Lydia's Law, is restrictive, and many families “have not found a physician or hospital with the resources or time” to pursue the clinical-trial process the law requires.²³⁰

Outside the United States, CBD oil is still in its infancy, but countries are moving toward accepting it along with medical marijuana more generally. In 2013, regulations prohibited the use of CBD oil but allowed “Canadian patients [to] obtain access to cannabis for medical purposes by visiting a health care practitioner.”²³¹ However, in 2015, the Supreme Court of Canada ruled the CBD-oil ban violated the Canadian constitution, making all forms of medical marijuana legal.²³² Israel has allowed medical marijuana since 1993, two years before California's experiment.²³³

Commercially, GW Pharmaceuticals of England has been developing CBD oil and other marijuana-based medicines for some time now.²³⁴ Its

226. *State Medical Marijuana Laws*, *supra* note 18; Bruenig, *supra* note 66, at 20.

227. *See State Medical Marijuana Laws*, *supra* note 18.

228. *Id.*; Ingold, *supra* note 156, at B1 (“A Colorado marijuana innovation is changing the way lawmakers in even the most conservative parts of the country talk about cannabis and is poised to create a rapid expansion in the number of states that have legalized marijuana in some way.”); Ben Felder, *Fallin Backs Marijuana Oil in Limited Medical Use*, OKLA. GAZETTE (Aug. 13, 2014), <http://okgazette.com/2014/08/13/fallin-backs-marijuana-oil-in-limited-medical-use/> [<https://perma.cc/JE4W-QEWY>] (stating CBD oil makes the marijuana issue mainstream and acceptable to conservatives).

229. Ingold, *supra* note 156, at 1B; *see also* Felder, *supra* note 228.

230. Mark Schaaf, *Treatment Still Eludes Children*, WIS. ST. J., Apr. 20, 2015, at A1; David Wahlberg, *Boy's Seizure Disorder Prompts Bill to Legalize Ingredient in Pot*, WIS. ST. J., Mar. 3, 2014, at A1.

231. MICHAEL J. RIEDER, IS THE MEDICAL USE OF CANNABIS A THERAPEUTIC OPTION FOR CHILDREN? 2 (2005), <http://www.cps.ca/en/documents/position/medical-use-of-cannabis> [<https://perma.cc/5UP3-5KFY>].

232. *R. v. Smith*, [2015] 2 S.C.R. 602, 617–18 (Can.).

233. Maayan Lubell, *Israeli Firm Takes the High Out of Marijuana*, WASH. POST, July 17, 2012, at E6.

234. Debra Borchardt, *GW Pharmaceuticals Stocks Responds to Cannabis Drug Milestones*, FORBES (Apr. 27, 2015, 2:25 PM), <http://www.forbes.com/sites/debra-borchardt/2015/04/27/gw-pharmaceuticals-stocks-responds-to-cannabis-drug-milestones/#2ad43a3a87de> [<https://perma.cc/QZB5-TZ5H>].

two primary products are Sativex²³⁵ and Epidiolex.²³⁶ According to the U.S. National Institutes of Health's database, GW has conducted multiple clinical trials for its marijuana-based medicines in the United States.²³⁷ Sativex, although not yet approved in the United States, has been approved to treat MS spasticity in twenty-eight countries.²³⁸ Likewise, United Cannabis of Denver has begun to develop CBD.²³⁹ However, the company is losing money.²⁴⁰ Besides established pharmaceutical companies, Indian tribes could become significant contributors in CBD-oil production.²⁴¹ An Israel-based company is also developing CBD oil.²⁴²

It's too early to celebrate. The medical successes, while heartwarming and impressive, are anecdotal. And the results have not always been positive. Results from treating seizures with CBD vary widely.²⁴³ The limited amount of scientifically valid research is itself a cause of concern. Animal tests, though encouraging, have yet to be fully confirmed in medical studies using people.²⁴⁴ Scientific validation is not likely soon.²⁴⁵ Experimenting on ill children is difficult, and many researchers are hesitant to examine marijuana as a medicine.

Dr. Orrin Devinsky, a professor of neurology at NYU Langone Medical Center, explained that treating epilepsy with marijuana must be scientifically verified as anecdotal evidence is "only a sliver of the full

235. *Sativex*, GW PHARM., <https://www.gwpharm.com/products-pipeline/sativex> [https://perma.cc/5BBN-Y3TA].

236. *GW's Epidiolex Clinical Program*, GW PHARM., <https://www.gwpharm.com/epilepsy-patients-caregivers/patients> [https://perma.cc/J5UX-V43W]; see also Borchardt, *supra* note 234; Lippman, *supra* note 138, at 31 (stating Epidiolex is all natural, 100% CBD).

237. *List Results for Search of "GW Pharmaceuticals Ltd.,"* CLINICALTRIALS.GOV, https://www.clinicaltrials.gov/ct2/results?spons=%22GW+Pharmaceuticals+Ltd.%22&spons_ex=Y&pg=1 [https://perma.cc/W5QQ-S77R] (showing forty-two clinical trials).

238. *Sativex*, *supra* note 235.

239. Steve Raabe, *United Cannabis of Denver to Help Calif. Indian Tribes Grow Marijuana*, DENV. POST (Jan. 8, 2015, 9:55 AM), <http://www.denverpost.com/2015/01/08/united-cannabis-of-denver-to-help-calif-indian-tribes-grow-marijuana-2/> [https://perma.cc/7TKM-5NYR].

240. *Id.*

241. Keeler, *supra* note 98.

242. Lubell, *supra* note 233, at E6.

243. Ingold, *supra* note 156, at 1A.

244. Barton, *supra* note 178; Timothy E. Welty, Adrienne Luebke & Barry E. Gidal, *Cannabidiol: Promise and Pitfalls*, 14 EPILEPSY CURRENTS 250, 250–51 (2014) ("While animal experimental data clearly suggest a potential benefit, supportive clinical data are quite sparse.").

245. Barton, *supra* note 178.

dataset.²⁴⁶ To date, little scientifically validated evidence supports using CBD oil to treat epilepsy patients.²⁴⁷ Even less evidence exists that treating children with marijuana is safe.²⁴⁸ In addition, CBD-oil products are not standardized. Many variations of CBD oil exist.²⁴⁹ The wide array of CBD levels makes systematic study difficult²⁵⁰ but not impossible.

Much is still left to discover. A meta-analysis of medical use of cannabis in the *Journal of the American Medical Association* in 2015, involving seventy-nine studies and over 6,000 patients, found support for using marijuana to treat chronic pain and spasticity, weight gain, sleep disorders, Tourette syndrome, and the nausea and vomiting associated with chemotherapy.²⁵¹ However, the study's authors cautioned that larger, more robust studies are needed for a variety of factors, such as determining the dosages for effective use, minimizing side effects, and regulating the drug's THC and CBD content.²⁵²

The epilepsy medical community is split on the issue of medical marijuana, with the majority of specialists being more cautious about recommending medical marijuana until more testing is done.²⁵³ With more support and government encouragement for marijuana research, those specialists could soon have the data they need. However, if politicians continue with their "reefer madness" mentality, research will stop.

As a collateral issue, allowing CBD oil could affect the movement to legalize marijuana.²⁵⁴ There is an argument that legalizing CBD oil is just the first step in a three-step plan to fully legalize marijuana.²⁵⁵ After

246. Devinsky, *supra* note 166, at 7.

247. Rollins, *supra* note 9, at 59.

248. *Id.*

249. Bruenig, *supra* note 66, at 22.

250. *Id.* (reporting that FDA testing of CBD products showed a third of the products contained no CBD, and most contained only one percent); Lippman, *supra* note 138, at 1.

251. Penny F. Whiting et al., *Cannabinoids for Medical Use: A Systemic Review and Meta-Analysis*, 313 J. AM. MED. ASSN. 2456, 2456 (2015).

252. *See id.* at 2468; Welty, Luebke & Gidal, *supra* note 244, at 251 (recognizing a possible role for CBD but concluding that "given the lack of well-controlled trials, we must also ask if we are getting ahead of ourselves").

253. Gary W. Mathern, Laurie Beninsig & Astrid Nehlig, *Fewer Specialists Support Using Medical Marijuana and CBD in Treating Epilepsy Patients Compared with Other Medical Professionals and Patients: Results of Epilepsia's Survey*, 56 EPILEPSIA 1, 4-6 (2015) (surveying over 600 doctors, the majority of whom agreed that medical marijuana has potential, but fewer specialists than general practitioners thought enough safety information existed).

254. *See* Ingold, *supra* note 156, at 1B.

255. *Cf. id.*; Felder, *supra* note 228 ("CBD oil has become a gateway drug of sorts in

showcasing medical marijuana's benefits, low costs, and few side effects, the second step would be to legalize all forms of medical marijuana, including those smoked and eaten. After a period of time, society would recognize that marijuana has many benefits and few, if any, potential problems and would take the third and final step—full recreational legalization. Of course, this strategy assumes a lot about the public's reaction to marijuana. This plan also could take decades to come to fruition. It certainly would not happen overnight.

Yet in Oklahoma, medical marijuana's (or at least CBD oil's) reach expanded almost before the governor's ink was dry on the original bill.²⁵⁶ As noted above, Katie's Law originally limited CBD oil to those under eighteen years old.²⁵⁷ Within a year the law was amended to allow CBD oil for adults with the same untreatable illnesses, effective November 1, 2016.²⁵⁸ Medical marijuana has found a home in Oklahoma. Currently, seventeen states allow CBD oil,²⁵⁹ and the numbers are growing. The future favors using CBD oil for a variety of ailments.

Nationally, interest in the 2016 elections has recently derailed the previously steady movement for medical marijuana. Despite an overriding interest in the presidential election, some in Congress took steps toward ending marijuana's prohibition. Bipartisan bills in both the House and Senate attempted to “end the federal ban on medical marijuana,” reclassifying it as a Schedule II drug and “allow[ing] VA doctors to prescribe medical marijuana” to their patients.²⁶⁰ This would have been good news for veterans suffering from PTSD.²⁶¹ At present, the doctors are not allowed to even discuss medical marijuana with those veterans.²⁶² Marijuana issues are on the horizon.

conservative states.”).

256. Dale Denwalt, *Broader Coverage: Bill Would Make CBD Oil Available for Adults and More Conditions*, J. REC. (Okla. City, Okla.) May 3, 2016, at 20A; *see also* H.B. 2835, 55th Leg., 2d Reg. Sess. (Okla. 2016).

257. *Id.*

258. Rick M. Green, *Gov. Fallin Signs Bill Approving Expanded Use of Cannabidiol*, DAILY OKLAHOMAN, May 14, 2016, at 4A.

259. Bruenig, *supra* note 66, at 20; *State Medical Marijuana Laws*, *supra* note 18.

260. Drew Brooks, *It Works for Me*, FAYETTEVILLE OBSERVER (N.C.), Mar. 19, 2015, at 1A.

261. *Id.*; *see also* Betthausen, Pilz & Vollmer, *supra* note 190, at 1283.

262. Jan Hefler, *Booker and Rand Paul Propose Bill Lifting Restrictions on Medical Marijuana*, PHILA. INQUIRER (Mar. 11, 2015, 11:59 PM), http://www.philly.com/philly/news/politics/20150311_Federal_bill_proposed_to_legalize_medical_marijuana.html [<https://perma.cc/NN67-D492>].

Recent regulatory changes have made it easier for scientists to study marijuana. Research grants involving marijuana no longer undergo a Public Health Service review, speeding up the approval process.²⁶³ In addition, studies can now use a variety of marijuana strains, including strains not grown at the University of Mississippi farm.²⁶⁴ These changes should increase the number of researchers employing marijuana or its derivatives in medical discoveries. But these changes will take time.

VI. CONCLUSION

This Article examined Oklahoma's recent and dramatic changes toward medical marijuana. We started with a brief history of marijuana regulation in the United States, including the tumultuous changes of the past five years. Next, we discussed Oklahoma's first attempt at medical marijuana. After that, we explored Katie's Law, Oklahoma's second version of medical marijuana. We concluded with recommendations for the future of CBD-oil legalization in other states.

Marijuana policy is currently built on a house of cards, relying on a nonenforcement policy of a former president's administration. Everything can and will change under the Trump administration. The pressing question is how. The answer to that question hangs like a sword of Damocles over the states' marijuana laws. Regardless, these are exciting times in marijuana-policy research.

Oklahoma's unique, well-detailed policy is rationally related to its goals and has minimized the potential for recreational abuse. CBD oil's life-changing effects in severely ill children are breathtaking. Katie's Law should serve as a model CBD-oil law for the nation.

263. Eisenstein, *supra* note 43, at S16.

264. *Id.*