
TRIPPING OVER LEGAL HIGHS: WHY THE CONTROLLED
SUBSTANCES ANALOGUE ENFORCEMENT ACT IS
INEFFECTIVE AGAINST DESIGNER DRUGS

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Though the United States has an established framework of classifying and combating traditional drugs, the relatively new problem of synthetic drugs calls for a similarly new solution. This Note discusses the established legal tools we have used in the past and highlights their insufficiencies in contending with synthetic drugs. It also describes methods implemented in other countries, along with proposed solutions that have popped up in our legislature in recent years.

Ultimately, this Note recognizes that our status quo drug laws were built for a different time and are too slow to react to the analogues and synthetics of today. To update the laws suitable for this new frontier, this Note proposes four changes. First, this Note suggests that the United States amend the Controlled Substances Act to eliminate loopholes and allow for more flexible scheduling. Second, it advises that we take a second look at our current scheduling to ensure that it comports with our current knowledge of drugs. Third, it suggests that we legalize those drugs that we know are less harmful. Finally, it recommends that we promote education about drugs, both legal and illegal. With the changes this Note proposes, our drug laws can be updated for the modern era and the challenges we now face.

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* J.D. Candidate, 2017, University of Illinois College of Law. I would like to thank Professor Andrew D. Leipold for his guidance in writing this Note. I would also like to thank the editors, members, and staff of the *University of Illinois Law Review*. I dedicate this Note to my mother and father for their overwhelming love and support.

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I. INTRODUCTION

On March 20, 2015, in an attempt to scale a fence surrounding the Fort Lauderdale Police Department parking lot, Shanard Neely¹ was impaled by a fourteen-inch wrought-iron spike atop the fence.² Likely unintentional, the location of this attempt afforded Neely some fortune—a response team was nearby to cut away the surrounding fence and send him and the spike, which pierced near his crotch through his buttocks, to the hospital twenty minutes later.³ Neely told the police he had smoked flakka prior to this endeavor.⁴

Flakka is a street name for the designer drug alpha-PVP, which is a derivative of methylenedioxypropylvalerone, one of the predominant ingredients in bath salts.⁵ Currently concentrated in Florida, flakka is known to give users a high similar to cocaine,⁶ with side effects including extreme physical strength and confidence.⁷ Flakka is not a controlled substance, but, depending on its interpretation under the Controlled Substances Analogue Enforcement Act (“CSAEA” or “Analogue Act”),⁸ it may likely be considered one, if certain criteria are met.⁹ In the

1. *Exclusive: Man on “Flakka” Impaled While Trying to Climb Fence*, CBS MIAMI (Mar. 24, 2015, 6:35 PM) [hereinafter *Man on Flakka*], <http://miami.cbslocal.com/2015/03/24/exclusive-man-on-flakka-impaled-while-trying-to-climb-fence/>

2. Carli Teproff, *Man Impaled While Scaling Fence Outside Fort Lauderdale Police Station*, MIAMI HERALD (Mar. 24, 2015, 10:45 PM), <http://www.miamiherald.com/news/local/community/broward/article16235357.html>.

3. *Man on Flakka*, *supra* note 1.

4. *Id.*

5. David DiSalvo, *The Backstory You Really Need To Know About Flakka and Other Synthetic Drugs*, FORBES (Apr. 15, 2015, 7:27 AM), <http://www.forbes.com/sites/daviddisalvo/2015/04/15/the-backstory-you-really-need-to-know-about-flakka-and-other-synthetic-drugs/>.

6. Carina Storrs, *What Is Flakka (Aka Gravel) And Why Is It More Dangerous Than Cocaine?*, CNN (May 26, 2015, 7:59 PM), <http://www.cnn.com/2015/05/26/health/flakka-gravel-illegal-drugs/>.

7. DiSalvo, *supra* note 5.

8. 21 U.S.C. § 813 (2012) (providing that any “controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law as a controlled substance in schedule I”).

meantime, with authority from the CSAEA,¹⁰ in March of 2014, the Drug Enforcement Administration (“DEA”) placed a two-year temporary ban on the compound.¹¹

A temporary “win” with flakka is far from a success when looking at the whole of the designer-drug market.¹² Most of these drugs are manufactured by highly sophisticated and educated chemists in China, India, and Pakistan.¹³ Once the manufacturer learns that a particular substance is scheduled in the U.S., their chemists can easily alter the drug’s chemical structure, creating a different compound that has similar effects, but is not scheduled.¹⁴ The relative ease in evading governmental regulation, coupled with high profit margins, makes the designer-drug trade an attractive market to enter.¹⁵

Therefore, it should come as no surprise that there is an influx of designer drugs which are manufactured as alternatives for mainstream, illegal controlled substances such as cocaine, LSD, and cannabis.¹⁶ Most of these drugs have not been tested on humans, or even animals, making the risks associated with consumption endless.¹⁷ Nevertheless, there is a strong demand for designer drugs.¹⁸ Not only are they easily available online, but designer drugs also provide users with a high, are relatively inexpensive, and can be used without the risk of failing a drug test.¹⁹

9. See Michael Scott Leonard, ‘Analogue’ Drug Charges Require Proof of Defendant’s Knowledge, *Justices Say*: *McFadden v. United States*, 21 WESTLAW J. HEALTH CARE FRAUD 9, at *2 (2015).

10. 21 U.S.C. § 811(h)(1) (2012) (“If the Attorney General finds that the scheduling of a substance in schedule I on a temporary basis is necessary to avoid an imminent hazard to the public safety, he may, by order . . . schedule such substance in schedule I if the substance is not listed in any other schedule in section 812 of this title . . .”).

11. Schedules of Controlled Substances: Temporary Placement of 10 Synthetic Cathinones Into Schedule I, 79 Fed. Reg. 12938 (Mar. 7, 2014) (to be codified at 21 C.F.R. pt. 1308).

12. Oriana Zill & Lowell Bergman, *Do The Math: Why the Illegal Drug Business is Thriving*, PBS, <http://www.pbs.org/wgbh/pages/frontline/shows/drugs/special/math.html> (last visited Mar. 7, 2017) (“The C.I.A. and other U.S. intelligence sources believe that synthetics like amphetamines and designer drugs like Ecstasy will garner a larger and larger share of the market in years to come.”).

13. Kate Baggaley, *Drugs By Design: Corrupt Chemists Tweak Compounds Faster Than Law Enforcement Can Call Them Illegal*, 187 SCI. NEWS 22, 25 (May 16, 2015).

14. Joseph A. Cohen, *The Highs of Tomorrow: Why New Laws and Policies Are Needed to Meet the Unique Challenges of Synthetic Drugs*, 27 J.L. & HEALTH 164, 178–79 (2014). See also Baggaley, *supra* note 13, at 25 (“[D]rugmakers ‘can tweak substances and come up with new ones faster than the regulatory process allows us to schedule them . . .’”); Kevin T. Brown, *A Problem of Design: Proposed Changes to Controlled Substance Analogue Statutes—Modifying Tennessee’s Approach*, 45 U. MEM. L. REV. 395, 408–09 (2014).

15. Zill & Bergman, *supra* note 12 (“[S]ynthetics like methamphetamine are often even cheaper to manufacture costing approximately \$300 to \$500 per kilo to produce in clandestine labs in the US and abroad and sold on US streets for up to \$60,000/kilo (retail).”).

16. Baggaley, *supra* note 13, at 22.

17. *Id.* at 23.

18. *Id.*

19. Kristen Gwynne, *The Truth About Synthetic Marijuana Known As Spice*, ROLLING STONE (July 11, 2015), <http://www.rollingstone.com/culture/news/the-truth-about-synthetic-marijuana-known-as-spice-20150711>.

As alluded to earlier, the federal government has made efforts to ban these substances.²⁰ In 1970, Congress enacted the Controlled Substances Act (“CSA”) to provide the federal government with a uniform system that would allow it to control both psychotropic and narcotic drugs at the same time.²¹ The CSA, however, was powerless against new unscheduled designer drugs.²² With designer drugs on the rise, Congress responded with the CSAEA, which was intended to eliminate the loopholes in prosecuting persons who manufactured substances substantially similar to those prohibited under the CSA.²³

Even with the CSAEA, manufacturers and distributors have been able to circumvent governmental sanctions by challenging the “substantially similar” requirement²⁴ or claiming that they lacked knowledge that the substance was controlled.²⁵ Congress stepped in, yet again, enacting the Synthetic Drug Abuse Prevention Act of 2012 (“SDAPA”) to address this issue.²⁶ To its credit, SDAPA took twenty-six of the most prevalent designer drugs and placed them into the schedule I classification of the CSA.²⁷ In addition, SDAPA doubled the maximum time, now three years, that a substance could be temporarily scheduled by the Drug Enforcement Agency.²⁸ SDAPA, however, failed to address the statutory issues with CSAEA and, for the most part, has functioned as a mechanism to buy time against the ever-evolving synthetic-drug trade.²⁹

This Note argues that the United States’ current enforcement statute is ineffective and compares the CSA and its analogues to similar legislation across the globe. Part II introduces the history of designer drugs, explains why they are detrimental to society, discusses the issues with the CSA’s regulation, and familiarizes the reader with different approaches in other countries. Part III analyzes CSAEA and case law surrounding its interpretation. It also discusses various bills circulating in Congress and their possible effects, as well as how states have reacted to designer drugs. It outlines New Zealand’s approach (a *pseudo* leader in designer

20. *Synthetic Drugs (a.k.a. K2, Spice, Bath Salts, Etc.)*, OFF. OF NAT’L DRUG CONTROL POL’Y, [hereinafter *Synthetic Drugs*], <https://www.obamawhitehouse.archives.gov/ondcp/ondcp-fact-sheets/synthetic-drugs-k2-spice-bath-salts> (last visited Mar. 7, 2017).

21. Gregory Kau, *Flashback to the Federal Analog Act of 1986: Mixing Rules and Standards in the Cauldron*, 156 U. PA. L. REV. 1077, 1082 n.25 (2008).

22. *Id.*

23. *United States v. Forbes*, 806 F. Supp. 232, 238 (D. Colo. 1992) (“Congress declared that the purpose of the statute is to attack underground chemists who tinker with the molecules of controlled substances to create new drugs that are not yet illegal.”).

24. Tracy Bateman Farrell, Annotation, *Validity, Construction, and Operation of Controlled Substance Analogue Enforcement Act of 1986*, 188 A.L.R. FED. 325 (2003) (outlining the various decisions to the CSAEA and how the act has fared against numerous challenges).

25. See Leonard, *supra* note 9, at *2 (“Someone selling an obscure analogue under a street name might not realize that it mimics the action of cocaine or meth, which makes knowledge of the drug’s identity insufficient on its own to support criminal liability, Justice Thomas noted.”).

26. Cohen, *supra* note 14, at 177.

27. *Id.*

28. *Id.*

29. *Id.*

drug legislation) and briefly compares our system to others across the globe. Part IV then recommends a better method to tackle the issues associated with unregulated designer drugs. Finally, Part V brings everything together and provides a short summary explaining where we are today.

II. BACKGROUND

A. *What Are Designer Drugs?*

Designer drugs refer to substances that either mimic the effects of, or are chemically similar to, controlled substances, or both.³⁰ The term is used interchangeably with “club drugs,” “party drugs,” and “synthetic drugs.”³¹ Typically, a designer drug contains three characteristics: “1) it is synthesized from common chemicals; 2) it is uncontrolled by the Drug Enforcement Administration due to the drug’s unique chemical structure; and 3) it is usually marketed under exotic-sounding names, such as acid, ecstasy, white china, or spice.”³² It bears noting that lysergic acid diethylamide, commonly known as LSD or acid, was scheduled in 1970 with the launch of the CSA.³³ In addition, 3,4-methylenedioxy-N-methylamphetamine, known as ecstasy or MDMA, was also placed into schedule I in 1988.³⁴ That being said, most, if not all, designer drugs are marketed under unique brand names.³⁵

Although designer drugs have received more attention in the last couple of years, they are far from a new phenomenon.³⁶ In 1942, in an attempt to discover a truth serum for use during interrogations, the chief of the Office of Strategic Services, a predecessor to the CIA, assembled a crew of scientists.³⁷ The scientists wound up creating an extremely potent

30. *Dangerous Synthetic Drugs: Hearing Before the S. Caucus on Int’l Narcotics Control*, 113th Cong. 1 (2013) (statement of Nora D. Volkow, Director, Nat’l Inst. on Drug Abuse, Nat’l Inst. Health, U.S. Dep’t of Health and Human Serv.), <http://www.drugcaucus.senate.gov/sites/default/files/AMV075-NIH%20synthetic%20testimony%20gl%20gd%20final.pdf>.

31. *Id.*

32. Kathryn E. Brown, *Stranger Than Fiction: Modern Designer Drugs and the Federal Controlled Substances Analogue Act*, 47 ARIZ. ST. L.J. 449, 451 (2015).

33. See 21 U.S.C. § 812(b)(1)(c)(9) (2012) (listing “lysergic acid diethylamide” under Schedule I for lacking “accepted safety for use of the drug” even under medical supervision).

34. Schedules of Controlled Substances; Scheduling of 3,4-Methylenedioxymethamphetamine (MDMA) Into Schedule I of the Controlled Substances Act; Remand, 53 Fed. Reg. 5156 (Feb. 22, 1988) (to be codified at 21 C.F.R. pt. 1308).

35. *Dangerous Synthetic Drugs: Hearing Before the S. Caucus on Int’l Narcotics Control*, 113th Cong. 1, 6 (2013) (statement of Joseph T. Rannazzisi, Deputy Assistant Administrator, Office of Diversion Control, Drug Enforcement Administration) [hereinafter *Rannazzisi Senate Hearing*], http://www.drugcaucus.senate.gov/sites/default/files/Rannazzisi_Dangerous%20Synthetic%20Drugs%20Testimony%20%28SDC%29.pdf (listing various names of synthetic cannabinoids, “including Spice, K2, Blaze, Red X Dawn, Paradise, Demon, Black Magic, Spike, Mr. Nice Guy, Ninja, Zohai, Dream, Genie, Sence, Smoke, Skunk, Serenity, Yucatan, Fire, and Crazy Clown.” (internal quotations omitted)).

36. *Id.* at 1.

37. MARTIN A. LEE & BRUCE SHLAIN, *ACID DREAMS: THE CIA, AND THE SIXTIES REBELLION* 3 (1985).

marijuana extract, which they called “TD” for “Truth Drug.”³⁸ Its effects were less than expected, providing inconsistent results ranging from its subjects talking a lot to absolute silence and paranoia.³⁹ Following World War II, the CIA continued the project, and in the 1950s came across LSD.⁴⁰ Although promising at first, LSD quickly proved unable to accomplish its desired truth-serum effects.⁴¹ Nonetheless, the medical and scientific community continued to research the substance, and in the 1960s, LSD made its debut in the recreational drug scene.⁴² LSD, cocaine, heroin, and amphetamines were the major drugs of abuse in the 1960s.⁴³ Unfortunately for LSD, its popularity and media attention quickly led to panic and a total ban, irrespective of its use in medical or psychological research.⁴⁴ Beginning in the late 1970s and early 1980s, underground chemists manufactured substances designed to produce pharmacological effects similar to those of banned controlled substances, but with enough variance to skirt governmental authority.⁴⁵

In the more than half a century since LSD was first introduced, designer drugs have continued to exist, making their way into the global economy.⁴⁶ The DEA has identified seven classifications of designer drugs;⁴⁷ the most popular—synthetic cannabinoids—mimic THC, the active chemical in cannabis.⁴⁸ The United States first reported synthetic cannabinoids within its borders in December of 2008, after the U.S. Customs and Border Protection seized a shipment of “Spice.”⁴⁹ Since 2008, the amount and variations of synthetic cannabinoids has continued to in-

38. *Id.* at 4.

39. *Id.* at 4–5.

40. See Steven J. Novak, *LSD Before Leary: Sidney Cohen's Critique of 1950s Psychedelic Drug Research*, 88 HIST. SCI. SOC'Y 87, 90–109 (1997) (providing an explanation of LSD's introduction in the United States and noting that although mainstream research started in America in the 1950s, it was actually discovered by Albert Hofmann in 1938); LEE & SHLAIN, *supra* note 37, at 12.

41. LEE & SHLAIN, *supra* note 37, at 14.

42. ALBERT HOFMANN & MARK PLUMMER, *LSD MY PROBLEM CHILD: REFLECTIONS ON SACRED DRUGS, MYSTICISM AND SCIENCE* 23 (Jonathan Ott trans., MAPS 5th ed.) (2009) (“It was for a time the number one drug in mass consumption, especially in the U.S.”).

43. F. Ivy Carroll et al., *Designer Drugs: A Medicinal Chemistry Perspective*, ANNALS N.Y. ACAD. SCI. 18, 18 (2012).

44. See HOFMANN & PLUMMER, *supra* note 42, at 23; see also Brown, *supra* note 32, at 452 (“LSD's widespread use triggered panic among many American families and thus eventually in lawmakers as well.”).

45. Carroll et al., *supra* note 43, at 18.

46. *Rannazzisi Senate Hearing*, *supra* note 35, at 4 (“some 80 countries and territories, from all regions of the world, provided data on the emergency of NPS [New Psychoactive Substances].”).

47. U.S. DRUG ENFT ADMIN. OFFICE OF INTELLIGENCE WARNING, PLANS & PROGRAMS, NATIONAL DRUG THREAT ASSESSMENT SUMMARY 14 (2013) [hereinafter NATIONAL DRUG THREAT ASSESSMENT SUMMARY], <http://www.dea.gov/resource-center/DIR-017-13%20NDTA%20Summary%20final.pdf>. The classifications are: cannabinoids, phenethylamines (also known as synthetic cathinone's), phencyclidines or arylcyclohexamines, tryptamines, piperazines, pipradrols or n-ring systems and tropane Alkaloids. *Id.*

48. *Rannazzisi Senate Hearing*, *supra* note 35, at 4–5.

49. U.S. DRUG ENFT ADMIN. OFFICE OF DIVERSION CONTROL, NATIONAL FORENSIC LABORATORY INFORMATION SYSTEM: YEAR 2014 ANNUAL REP. 18 (2015), <http://www.dea diversion.gov/nflis/NFLIS2014AR.pdf>.

crease.⁵⁰ The second most popular classification of designer drugs, called synthetic cathinones, are comparable to stimulants such as cocaine and ecstasy.⁵¹ These compounds, some known as bath salts, have also seen an increase in the United States since 2009.⁵² Their continued use suggests designer drugs are not going anywhere. Perhaps the reason they are getting so much attention today is in large part due to the enormous supply, infinite variety, and greater ease in obtaining them.⁵³

B. *What's Wrong with Designer Drugs?*

The issue with designer drugs is simple—they are dangerous.⁵⁴ To start, these drugs are manufactured in laboratories without standards, safety, or efficacy studies.⁵⁵ As a result, even from the same manufacturer, a drug's potency can vary from package to package.⁵⁶ Not only are the packages inconsistent, the synthetic drug itself, meant to imitate a common illegal substance, can also be one hundred times more potent than its counterpart.⁵⁷ Because users lack this information, many have experienced strokes, heart attacks, and kidney damage due to overconsumption.⁵⁸ In addition, the drugs are manufactured without significant testing (if any at all). Even if the user consumed the drug and dose that they intended, side effects such as violence, delirium, paranoia, and self-mutilation are not uncommon.⁵⁹ Essentially, clandestine chemists are using naïve, misled drug users as their guinea pigs, and, at times, their experiments are resulting in death.⁶⁰

The case of Robert Nkemdiche can serve as a recent example. On December 13, 2015, Nkemdiche, a high-profile college football player who was a projected first-round draft pick, fell from a four-story, double-glass window at an Atlanta hotel room after consuming what police first thought was cannabis.⁶¹ Nkemdiche was charged with possession of marijuana following the discovery of seven joints in his hotel room.⁶² The next day, multiple sources revealed Nkemdiche's fall was not the product of

50. NATIONAL DRUG THREAT ASSESSMENT SUMMARY, *supra* note 47 (“According to the NFLIS [National Forensic Laboratory Information System], there were 29,467 synthetic cannabinoid drug reports in 2012, an increase of 1,402 percent from 2009 . . .”).

51. *Id.*

52. *Id.* (“In 2009 there were only 26 NFLIS reports involving synthetic cathinones; that number skyrocketed to 9,189 (a 352.4 percent increase) in 2012.”).

53. *Rannazzisi Senate Hearing, supra* note 35, at 1.

54. *See* Baggaley, *supra* note 13 (explaining the range of side effects associated with unregulated designer drugs).

55. *Rannazzisi Senate Hearing, supra* note 35, at 1–2.

56. *See* Brown, *supra* note 32, at 470.

57. Baggaley, *supra* note 13.

58. *Id.*

59. *Id.*

60. *Rannazzisi Senate Hearing, supra* note 35, at 2.

61. Clay Travis, *Ole Miss' R. Nkemdiche's Use of Synthetic Marijuana Led to Hotel Fall*, OUTKICK THE COVERAGE (Dec. 14, 2015, 5:49 PM), <http://www.outkickthecoverage.com/ole-miss-s-robert-nkemdiche-s-use-of-synthetic-marijuana-led-to-hotel-fall-121415>.

62. *Id.*

marijuana, but of synthetic cannabinoids.⁶³ This makes sense, considering Nkemdiche's fall occurred after the paranoid 296-pound defensive tackle was convinced someone had been chasing him.⁶⁴

In many cases, teens and young adults are lured into the designer drug market because it is perceived as a safe, legal alternative.⁶⁵ This perception is furthered when the drugs are sold in gas stations and head shops across the country.⁶⁶ Of course, one should not forget that these drugs are sought for their desired effects, including euphoria, alertness, and sexual arousal.⁶⁷ And while cannabis remains federally illegal, individuals who are subject to drug testing, such as parolees, military personnel, corporate employees, and athletes, can get "legal" highs without having to worry about failing a drug test.⁶⁸ Robert Nkemdiche is a prime example of synthetic-drug use among athletes.⁶⁹

While the drug user is not always innocent, the scales are uneven when what they thought was an informed decision is entirely speculative.⁷⁰ For example, the term "Molly," which once referred to pure, high-quality MDMA, the active ingredient found in ecstasy, has since been diluted with designer drugs using the same name.⁷¹ These designer drugs, which have been known to contain 4-MEC and alpha-PVP (flakka mentioned earlier), have caused thousands of deaths and even more hospitalizations over the past six years.⁷² Molly is just one example of unfortunate and frequent consumer misperceptions. In January of 2014, the synthetic drug 25i-NBOMe, a hallucinogen, caused the death of a seventeen-year-old girl in Minnesota, who thought she was experimenting with LSD.⁷³

Finally, looking at the supplier side, the incentives to continue producing designer drugs are much greater than for the drugs they are de-

63. *Id.*

64. *Id.*

65. Timothy P. Stackhouse, *Regulations in Wackyland: Capturing the Last of the Designer Drugs*, 54 ARIZ. L. REV. 1105, 1132 (2012).

66. Meredith Kile, *Need To Know: The Dangerous Facts About 'Legal' Designer Drugs*, ALJAZEERA AM. (Mar. 12, 2014, 6:00 PM), <http://america.aljazeera.com/watch/shows/techknow/blog/2014/3/12/need-to-know-designerdrugs.html>.

67. *Rannazzisi Senate Hearing*, *supra* note 35, at 14.

68. Kile, *supra* note 66; *see also* Baggaley, *supra* note 13.

69. Travis, *supra* note 61.

70. Drew Griffin et al., *9 Things Everyone Should Know About The Drug Molly*, CNN (Nov. 2, 2015, 10:33 AM), <http://www.cnn.com/2013/11/22/health/9-things-molly-drug/> ("The drug called Molly isn't what most of its users think it is . . . [T]oday's Molly is most often not MDMA . . . [t]he DEA says only 13% of the Molly seized in New York state the last four years actually contained any MDMA . . .").

71. *Rannazzisi Senate Hearing*, *supra* note 35, at 13–14.

72. *Id.* at 14; Matthew Speiser, *The Synthetic Marijuana Trade Is A Multimillion-Dollar Industry*, BUSINESS INSIDER (Sept. 4, 2015, 6:30 PM), <http://www.businessinsider.com/dea-busts-show-lucrative-ness-of-synthetics-2015-9>.

73. Kevin Giles, *Five Teenagers Charged With Murder in Woodbury Drug Overdose*, STARTRIB. (May 30, 2014, 9:56 AM), <http://www.startribune.com/may-28-5-teens-charged-in-woodbury-drug-od/260934991/>.

signed to mimic.⁷⁴ Designer-drug laboratories require a smaller investment than stock drugs, such as heroin and cocaine, and can be sustained without the support of an international cartel to distribute the product.⁷⁵ Furthermore, the laboratories can be easily concealed and moved from one state to another in order to escape detection.⁷⁶ Compared only to cannabis, however, synthetics are roughly half as lucrative (providing a return between 600–700%), but require much less labor and lower startup costs.⁷⁷ Ultimately, the margins are too large to ignore, which is why designer-drug traffickers are not going away.

C. Regulation Issues

In 1970, Congress enacted the Controlled Substances Act (“CSA”) to combat the drug problem.⁷⁸ It served as a replacement for over fifty pieces of drug legislation and became effective on May 1, 1971.⁷⁹ The Department of Justice’s Bureau of Narcotics and Dangerous Drugs, a predecessor to the Drug Enforcement Administration, was in charge of enforcement.⁸⁰ For the first time in U.S. history, the law established a uniform system of control for both psychotropic and narcotic drugs.⁸¹ In 1973, following the CSA’s inception, President Richard Nixon created a single federal agency, the DEA, to consolidate and direct the initiative, as he declared “an all-out global war on the drug menace.”⁸²

In enacting the CSA, Congress classified a number of drugs into five categories based on their addictive potential, therapeutic value, and safety.⁸³ A schedule I drug is considered the most dangerous, with no scientific or medical purpose, a high likelihood for abuse, and a lack of recognized safety even when used under medical supervision.⁸⁴ On the other end of the spectrum, a schedule V drug “has a low potential for abuse . . . [and] has a currently accepted medical use in treatment in the United States.”⁸⁵ The CSA also provides for yearly updating of the schedules.⁸⁶ A

74. Zill & Bergman, *supra* note 12 (“And synthetics like methamphetamine are often even cheaper to manufacture costing approximately \$300 to \$500 per kilo to produce in clandestine labs in the US and abroad and sold on US streets for up to \$60,000/kilo . . .”).

75. Kau, *supra* note 21, at 1082.

76. *Id.*

77. Speiser, *supra* note 72.

78. Kau, *supra* note 21, at 1082 n.25.

79. U.S. DRUG ENF’T ADMIN., DRUG ENFORCEMENT ADMINISTRATION: 1970-1975 9, <http://www.dea.gov/about/history/1970-1975.pdf>.

80. *Id.*

81. *Id.*

82. *Id.* at 13.

83. 28 C.J.S. *Drugs and Narcotics* § 221 (2016).

84. 21 U.S.C. § 812(b)(1) (2012).

85. *Id.* § 812(b)(5).

86. *Id.* § 812(a).

substance is illegal if it is scheduled by the CSA, making enforcement of scheduled substances rather straightforward.⁸⁷

When a substance is not scheduled, the CSA has little effect. Although the Attorney General has the power to add substances or transfer substances between schedules,⁸⁸ this provision is far too slow to react to the speed and ingenuity of designer drug manufacturers.⁸⁹ In 1984, in an attempt to solve this problem, Congress passed the Comprehensive Crime Control Act, giving the attorney general emergency scheduling authority when “on a temporary basis [it] is necessary to avoid an imminent hazard to the public safety.”⁹⁰ The process of obtaining even temporary scheduling, however, is slow and requires findings of past and current abuse,⁹¹ providing a solution only after it has become a problem.⁹²

The weaknesses of the CSA gave underground chemists a significant advantage when making designer drugs. Because the CSA functions under a rules-based regime,⁹³ scheduling drugs based on their specific molecular structure, if a particular compound is not scheduled it is not illegal.⁹⁴ This meant a clandestine chemist could make a small change in the substance’s chemical structure, while maintaining its desired effects, and be outside the reach of the law.⁹⁵ The manipulation of a designer drug’s chemical structure, and consequent circumvention of the law, remains an issue today.⁹⁶

Looking at some of the designer drugs currently on the market, specifically their vast array and enhanced potencies, one might conclude clandestine chemists are scientific savants. Unable to comment on their actual intelligence,⁹⁷ as attributed to discovering particular molecular

87. *Id.* §§ 841(a)(1), 844(a). *See* *Gonzales v. Raich*, 545 U.S. 1, 13 (2005) (“Congress devised a closed regulatory system making it unlawful to manufacture, distribute, dispense, or possess any controlled substance except in a manner authorized by the CSA.”).

88. *Id.* § 811(c) (considering “(1) [i]ts actual or relative potential for abuse (2) [s]cientific evidence of its pharmacological effect, if known (3) [t]he state of current scientific knowledge regarding the drug or other substance (4) [i]ts history and current pattern of abuse (5) [t]he scope, duration, and significance of abuse (6) [w]hat, if any, risk there is to the public health (7) [i]ts psychic or physiological dependence liability [and] (8) [w]hether the substance is an immediate precursor of a substance already controlled under this subchapter.”).

89. Stackhouse, *supra* note 65, at 1114 (“Individually listing drugs one by one through legislation was far too slow to keep up with the clandestine chemist”).

90. 21 U.S.C. § 811(h)(1); *Rannazzisi Senate Hearing*, *supra* note 35, at 9.

91. *Id.* § 811(c) (considering “[i]ts history and current pattern of abuse . . . [t]he scope, duration, and significance of abuse . . . [and] [w]hat, if any, risk there is to the public health”); *Id.* § 811(h)(3).

92. Stackhouse, *supra* note 65, at 1115.

93. Kau, *supra* note 21, at 1099.

94. Hari K. Sathappan, *Slaying the Synthetic Hydra: Drafting a Controlled Substances Act that Effectively Captures Synthetic Drugs*, 11 OHIO ST. J. CRIM. L. 827, 829 (2014).

95. Boyce Rensberger, *Designer Drugs’ Skirt the Law*, WASH. POST (Mar. 14, 1985), <https://www.washingtonpost.com/archive/politics/1985/03/14/designer-drugs-skirt-the-law/ac996b4f-28f9-43ca-938a-478a602589e9/>.

96. Sathappan, *supra* note 94.

97. Although some authors suggest today’s chemists are highly sophisticated. *See supra* text accompanying note 13.

modifications, these chemists are no more than savvy entrepreneurs.⁹⁸ Albert Hofmann, the scientist who discovered LSD, explained the process after discovering a new active compound in pharmaceutical-chemical research: “the chemist attempts, through alterations in its molecular structure, to produce new compounds with similar, perhaps improved activity, or with other valuable active properties.”⁹⁹ Much of this research ends up in academic and industrial journals, which clandestine chemists find, duplicate, and sell.¹⁰⁰ Both LSD and MDMA (also known as ecstasy) are prime examples of such conversion.¹⁰¹ As a result, many designer drugs on the current market are reproductions of legitimate pharmaceutical products or rejected alterations.¹⁰²

The ease of evading federal enforcement caused Congress to try a different approach.¹⁰³ In addition to prohibiting only listed chemicals, Congress passed the Controlled Substances Analogue Enforcement Act in 1986, which provided that a controlled substance analogue shall be treated as a schedule I controlled substance.¹⁰⁴ The CSAEA defines a controlled substance analogue if it meets three requirements.¹⁰⁵ First, the compound must be “substantially similar” to the chemical structure of a schedule I or II controlled substance.¹⁰⁶ Next, the compound must either have an effect substantially similar to, or greater than, the effect of a controlled schedule I or II substance, or the individual accused of violating the CSAEA must represent or expect the drug to have such an effect.¹⁰⁷ Finally, the drug must be intended for human consumption.¹⁰⁸

In a big step forward, the CSAEA introduced a standards-based approach which, in many ways, closed the gap from the CSA.¹⁰⁹ The Analogue Act, however, is far from perfect; it has been challenged numerous times as being void for vagueness, its statutory construction has been disputed, and its intent requirement, up until recently, was unclear.¹¹⁰ Further, because the CSAEA, by construction, does not explicitly identify restricted controlled substances, even if the drug is predominantly re-

98. Kau, *supra* note 21, at 1083–84 (“[C]landestine chemists and drug distributors found a winning business strategy. They would wait until a psychoactive compound was discovered, and then they would copy and sell it.”).

99. ALBERT HOFMANN, *LSD: MY PROBLEM CHILD* 31 (1980).

100. Sathappan, *supra* note 94.

101. Kau, *supra* note 21, at 1084.

102. *Id.* at 1085.

103. Mary Thornton, ‘Designer Drug’ Ban Urged, WASH. POST (July 11, 1985), <http://www.washingtonpost.com/archive/politics/1985/07/11/designer-drug-ban-urged/b72f55b1-8098-4ab1-b739-7a7a9a80f14b/>.

104. 21 U.S.C. § 813 (2012). *See also* Farrell, *supra* note 24.

105. *Id.* § 802(32)(A).

106. *Id.* § 802(32)(A)(i).

107. *Id.* § 802(32)(A)(ii).

108. *Id.* § 813.

109. *See* Kau, *supra* note 21, at 1099–00 (discussing the differences between a rules-based regime and the standards-based CSAEA).

110. *See* Farrell, *supra* note 24. The Supreme Court recently adjudicated the knowledge requirement, which is discussed in Part IV of this Note, in *McFadden v. U.S.*, 135 S.Ct. 2298 (2015).

garded as a controlled analogue, each prosecution must be tried independent of prior determinations.¹¹¹

This inefficient and repetitive process prompted Congress to modify its approach. On July 9, 2012, the Synthetic Drug Abuse Prevention Act (“SDAPA”) was signed into law.¹¹² The act placed twenty-six of the most dominant synthetic drugs into Schedule I classification of the CSA.¹¹³ The SDAPA also doubled the maximum time—now three years—that a substance could be temporarily scheduled by the DEA.¹¹⁴ Joseph Rannazzisi, a representative from the DEA, spoke about synthetic drugs and the SDAPA at a Senate Caucus in late 2013:

[The] DEA appreciates the support and hard work of this Caucus for taking the lead with this legislation to help law enforcement combat the proliferation of designer drugs. The extent and magnitude of the trafficking, regional distribution, and use of these drugs remains a problem since the passage of SDAPA and, in fact, designer drugs continue to proliferate throughout the country. SDAPA was a great starting point.¹¹⁵

As Rannazzisi’s statement suggests, although helpful, the SDAPA has not solved the synthetic-drug problem. It has failed to address the statutory barriers surrounding the CSAEA, and, in large part, has merely operated to buy time against the elastic, synthetic-drug industry.¹¹⁶

Finally, the DEA, Homeland Security, Federal Bureau of Investigations, U.S. Customs and Border Protection, and the Internal Revenue Service have teamed up on numerous occasions to implement enforcement operations.¹¹⁷ The first, “Operation Log Jam,” started in 2011 with the goal of targeting manufacturers, as well as wholesale and retail distributors of synthetic drugs.¹¹⁸ The operation resulted in 100 arrests and the seizure of over 2,000 pounds of both synthetic cathinones and cannabinoids, over five million packets ready for distribution, more than \$50,000,000 in U.S. Currency and additional assets, and enough information to warrant a second operation.¹¹⁹

In December 2012, the same group, now assisted by forty-five states’ domestic-law-enforcement departments as well as international partners, launched Project Synergy.¹²⁰ This operation proved even more successful than the last, resulting in 234 arrests and the seizure of almost 3,500 pounds of synthetic drugs, over 10,000 packets, and more than

111. *Rannazzisi Senate Hearing*, *supra* note 35, at 23.

112. Cohen, *supra* note 14, at 177.

113. *Id.*

114. *Id.*

115. *Rannazzisi Senate Hearing*, *supra* note 35, at 9.

116. Cohen, *supra* note 14, at 177.

117. *Rannazzisi Senate Hearing*, *supra* note 35, at 23–24.

118. *Id.*

119. *Id.* at 24.

120. *Id.*

\$50,000,000 in currency and assets.¹²¹ Despite these efforts, synthetic drugs remain available today and will likely increase.¹²²

D. How Other Countries Are Dealing with Designer Drugs

The United States is not alone in the battle against synthetics.¹²³ In 2010, Poland became one of the first European countries to outlaw almost all new psychoactive substances.¹²⁴ Ireland took a similar regulatory approach, banning all substances with a “psychoactive” effect, unless specifically exempt by law.¹²⁵ Britain is considering a comparable policy, although these blanket bans pose many problems.¹²⁶ Simply banning any substance with a psychoactive effect likely encompasses medical pharmaceutical products.¹²⁷ If a medical substance was banned, pharmaceutical companies would need to obtain a license to continue researching the compound—a time-consuming and costly process.¹²⁸

On the other hand, few countries have done away with regulation entirely.¹²⁹ In 2001, Portugal decriminalized the use and possession of all illicit drugs for up to a ten-day supply.¹³⁰ Anything in excess of a ten-day supply falls outside the decriminalization bubble, in which case offenders are prosecuted accordingly.¹³¹ Numerous reports suggest Portugal has benefited from this strategy, showing reduced drug use, fewer drug-induced deaths, reduction in HIV-infection rates, and lower synthetic-

121. *Id.*

122. NATIONAL DRUG THREAT ASSESSMENT SUMMARY, *supra* note 47, at 18 (“The threat posed by synthetic cannabinoids and synthetic cathinones will most likely continue to increase. The chemical make-up of these drugs often differs by only one compound. As DEA exercises its scheduling authority to control certain substances, producers will quickly change the chemical component of the newly banned substance to create a new one.”).

123. *Synthetic Drugs Flooding Market, New UN Study Shows*, UN NEWS CENTRE (May 20, 2014), <http://www.un.org/apps/news/story.asp?NewsID=47845#.Vq0kMzZDGZl>; *see also*, DAVID N. KHEY ET AL., EMERGING TRENDS IN DRUG USE AND DISTRIBUTION 84 (2014).

124. Joanna Berendt, *Poisonings in Poland Illustrate Global Challenge of Synthetic Drugs*, N.Y. TIMES (Oct. 14, 2015), <http://www.nytimes.com/2015/10/15/world/europe/poisonings-in-poland-illustrate-global-challenge-of-synthetic-drugs.html>.

125. David Barrett, *How a Ban on Legal Highs Could Work*, TELEGRAPH (Oct. 30, 2014, 6:00 AM), <http://www.telegraph.co.uk/news/uknews/crime/11197099/How-a-ban-on-legal-highs-could-work.html> (“Legal substances which affect the brain’s chemistry, including caffeine, alcohol, tobacco and prescription medicines, had to be exempted.”).

126. Berendt, *supra* note 124.

127. *Id.* (“According to the latest European drug report by the European Monitoring Center for Drugs and Drug Addiction, four of the newest psychoactive substances are also used as active ingredients in medicine.”).

128. *Id.*

129. Samuel Oakford, *Portugal’s Example: What Happened After It Decriminalized All Drugs, from Weed to Heroin*, VICE NEWS (Apr. 19, 2016), <https://news.vice.com/article/ungass-portugal-what-happened-after-decriminalization-drugs-weed-to-heroin>.

130. Glenn Greenwald, *Drug Decriminalization in Portugal: Lessons for Creating Fair and Successful Drug Policies*, CATO INST. 1, 3, 15 (2009), https://object.cato.org/sites/cato.org/files/pubs/pdf/greenwald_whitepaper.pdf.

131. *Drug Decriminalization in Portugal: A Health-Centered Approach*, DRUG POL’Y ALLIANCE (Feb. 2015) [hereinafter *Decriminalization in Portugal: Health-Centered*], http://www.drugpolicy.org/sites/default/files/DPA_Fact_Sheet_Portugal_Decriminalization_Feb2015.pdf.

drug use.¹³² In fact, in 2015 the European Monitoring Centre for Drugs and Drug Addiction reported that Portugal had the second-lowest number of drug-induced deaths in the European Union, behind Romania.¹³³ Furthermore, the prevalence rate of synthetic drugs in Portugal among young adults (ages fifteen to twenty-four) was at 0.2%, compared to Ireland with 9.7%.¹³⁴ While the United States Office of National Drug Control Policy disputes the scientific basis behind these reports, pointing out the difficulty of establishing a causal link, the fear that Portugal might be overrun by a nation of drug addicts has yet to materialize.¹³⁵

Of course, Poland and Ireland's zero-tolerance policies and Portugal's ten-day drug use permission slip are two very different, extreme measures to deal with the designer drug epidemic. In 2013, New Zealand introduced the Psychoactive Substances Act, which falls somewhere in the middle.¹³⁶ Prior to the act's introduction in 2005, for eight years New Zealand banned thirty-five distinct chemical compounds.¹³⁷ Once a particular compound was banned, however, another slightly tweaked, "legal" substance would take its place.¹³⁸ In an effort to avoid this endless battle, New Zealand sought to regulate, not criminalize, what it considered "safe" synthetic drugs.¹³⁹

The Psychoactive Substances Act assigns responsibility for clinical testing to manufacturers, who need to establish the compound has a low risk of harm.¹⁴⁰ A member of the Psychoactive Substances Expert Advisory Committee, Dr. Tingle, an associate professor in toxicology at the University of Auckland, defined low risk as compounds that are

unlikely to cause death after a low single dose; have no cumulative effect on repeated exposure; [are not] genotoxic (potential for cancer many years later); [are] not teratogenic ... (no harm to unborn child: NOT a user by choice!); [and] have a low addiction potential: indirect toxicity through modification of behaviour.¹⁴¹

132. See *id.*; Christopher Ingraham, *Why Hardly Anyone Dies From a Drug Overdose in Portugal*, WASH. POST (June 5, 2015), <https://www.washingtonpost.com/news/wonk/wp/2015/06/05/why-hardly-anyone-dies-from-a-drug-overdose-in-portugal/>; see also Zeeshan Aleem, *14 Years After Decriminalizing All Drugs, Here's What Portugal Looks Like*, POL'Y MIC (Feb. 11, 2015), <http://mic.com/articles/110344/14-years-after-portugal-decriminalized-all-drugs-here-s-what-s-happening#.uBRqkuIz8>.

133. EUROPEAN MONITORING CTR. FOR DRUGS AND DRUG ADDICTION, EUROPEAN DRUG REPORT: TRENDS AND DEVELOPMENTS 80 (2015), http://www.emcdda.europa.eu/attachements.cfm/att_239505_EN_TDAT15001ENN.pdf.

134. *Id.* at 50.

135. *Decriminalization in Portugal: Health-Centered*, *supra* note 131.

136. *Psychoactive Substances Act: Overview*, NEW ZEALAND DRUG FOUND., <https://www.drugfoundation.org.nz/psychoactive-substances-bill/history> (last visited Nov. 14, 2016).

137. *Id.*

138. *Id.*

139. Danielle Street, *It's Been Eight Months Since New Zealand Stopped Banning Designer Drugs*, VICE NEWS (Apr. 4, 2014) [hereinafter *Street No Eight Month Ban*], <http://www.vice.com/read/its-been-eight-months-since-new-zealand-stopped-banning-designer-drugs>.

140. *Psychoactive Substances Act: Animal Testing*, NEW ZEALAND DRUG FOUNDATION (May 8, 2014), <https://www.drugfoundation.org.nz/psychoactive-substances-bill/animal-testing>.

141. *Id.*

Although testing was estimated to take roughly two years, in the interim New Zealand allowed thirty-six products to be sold at approved retailers.¹⁴² Less than a year after the Psychoactive Substances Act was introduced, however, parliament passed a bill immediately revoking the interim product approvals.¹⁴³ In addition, the act was amended, eliminating the availability of animal testing for clinical trials.¹⁴⁴

The decision to suddenly ban the interim products came from growing reports of behavioral issues, including aggression, addiction, and congestion caused by the long lines of people waiting to purchase synthetic drugs.¹⁴⁵ The long lines were likely a result of the act's limiting retail licenses from 4,000 to 170 stores, yet they gave political activists more ground upon which to object.¹⁴⁶ As for the animal-testing amendment, Dr. Tingle said that, as of May 8, 2014, without animal testing there are no validated alternative tests for teratogenesis (which would ensure no harm to an unborn child).¹⁴⁷ Human testing is likely out of the question as well, since it would require ethical approval, which is doubtful since the Health and Disability Ethics Committee demands assurance that volunteers would not be adversely effected.¹⁴⁸ As a result, New Zealand currently does not have any approved psychoactive products and has not issued any licenses to retailers.¹⁴⁹

In April of 2015, New Zealand's National Business Review conducted an interview with Matt Bowden, known as "the godfather of NZ legal highs," who seemed optimistic that with funding, his company, Stargate International, could have clinically approved products on the shelves in two to three years.¹⁵⁰ The chances of his success are doubtful though since he has had to put his company into liquidation.¹⁵¹ At the moment, New Zealand's Psychoactive Substances Act, with zero approved substances to date, is accomplishing the same result as Poland and Ireland's total blanket bans, forcing the designer-drug market underground.¹⁵²

142. *Street No Eight Month Ban*, *supra* note 139; Danielle Street, *New Zealand's Synthetic Pot-heads Have to go Cold Turkey*, VICE NEWS (May 15, 2014, 7:25 AM) [hereinafter *Street Cold Turkey*], <https://news.vice.com/article/new-zealands-synthetic-pot-heads-have-to-go-cold-turkey>.

143. *Street Cold Turkey*, *supra* note 142.

144. *Id.*

145. *Id.*; *see also Dozens Line up for Legal Highs*, NEWSHUB (Apr. 21, 2014, 11:54 AM), <http://www.newshub.co.nz/nznews/dozens-line-up-for-legal-highs-2014042111#axzz3yrIcoLJN>.

146. *Street No Eight Month Ban*, *supra* note 139.

147. *Psychoactive Substances Act: Animal Testing*, *supra* note 140.

148. *Id.*

149. Nicholas Jones, *Warning on New Blackmarket Drug*, NZ HERALD (May 27, 2015, 11:44 AM), http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11455509.

150. Interview by Lisa Owen with Matt Bowden, co-founder, Stargate International, in New Zealand (Apr. 12, 2015), <http://www.nbr.co.nz/article/godfather-nz-legal-highs-plots-crowd-funded-comeback-ck-171285>.

151. Amanda Gillies, *Matt Bowden's Legal High Company in Liquidation*, NEWSHUB (May 16, 2015, 6:00 PM), <http://www.newshub.co.nz/nznews/matt-bowdens-legal-high-company-in-liquidation-2015051617#axzz3yrIcoLJN>.

152. Jones, *supra* note 149.

III. ANALYSIS

A. *The Loopholes in the CSAEA*

Congress enacted the CSAEA to encompass new drugs not listed as controlled substances.¹⁵³ The express purpose of the act was to “prohibit persons who specifically set out to manufacture or to distribute drugs which are substantially similar to the most dangerous controlled substances from engaging in this activity.”¹⁵⁴ The act defined an analogue as:

- (i) the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;
- (ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or
- (iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.¹⁵⁵

To summarize, in order to be deemed an analogue, Section 802(32)(a) compares the substance to a schedule I or II controlled substance, which must be “(i) structurally similar; (ii) have similar pharmacological effects; or (iii) be represented as having or intending to have those similar effects.”¹⁵⁶ Further, “[a] controlled substance [analogue] shall, to the extent intended for human consumption, be treated for the purposes of any Federal law as a controlled substance in schedule I.”¹⁵⁷

1. *What Does “Substantially Similar” Mean?*

The act has been challenged facially and as applied on numerous occasions due to its “substantially similar” language, although it has generally survived.¹⁵⁸ The difficulty with this test, and inherent in the fact that the CSAEA is intended to prohibit unknown copycat scheduled drugs, is that criminal liability is determined, and varies, on a case-by-case basis.¹⁵⁹ Litigating whether a drug is considered “substantially similar” to a controlled substance can be very costly since the outcome rests on a battle of the experts.¹⁶⁰

153. Stackhouse, *supra* note 65, at 1114.

154. U.S. v. Forbes, 806 F. Supp. 232, 235 (D. Colo. 1992).

155. 21 U.S.C. § 802(32)(A) (2012).

156. Sathappan, *supra* note 94, at 830. *See also*, 21 U.S.C. § 802(32)(A).

157. *Id.* § 813.

158. Stackhouse, *supra* note 65, at 1115.

159. Rannazzisi Senate Hearing, *supra* note 35, at 14.

160. U.S. v. Forbes, 806 F. Supp. 232, 238 (D. Colo. 1992); Kau, *supra* note 21, at 1105–06.

In a few circumstances, however, the analogue was found to be unconstitutionally vague as applied to a variety of chemical compounds.¹⁶¹ In *Forbes v. United States*, the court held that alphaethyltryptamine (“AET”), an antidepressant alleged to be substantially similar to DMT, was not a controlled substance analogue.¹⁶² Because the scientific community was unable to agree on which method to use in comparing its structural similarity, a person of reasonable intelligence would have to guess whether AET was considered a controlled substance.¹⁶³ The court acknowledged the act’s purpose, but held that the statute was unconstitutionally vague as applied to AET under the unique facts of the case.¹⁶⁴ Although *Forbes* is an outlier, it exemplifies certain deficiencies in the act and shows how, with the right expert and a unique, albeit harmful, drug, an individual can avoid criminal liability.¹⁶⁵

Assuming the constitutionality of the “substantially similar” language, there still exists the question: how a court should reach this determination?¹⁶⁶ Without guidance from the statute itself, courts have implemented three different tests to decide “substantial similarity.”¹⁶⁷ The first test, affirmed by the Fourth Circuit,¹⁶⁸ is called the “core arrangement” method.¹⁶⁹ This test looks at the core arrangement of atoms—in this particular case, tryptamine—between the alleged analogue drug and controlled substance.¹⁷⁰ Even though the two substances differed in element substitutions, they both shared the same core, tryptamine, which was noted as being a common core to many hallucinogenic drugs.¹⁷¹ The defendant’s expert, which the court accredited, distinguished the two substances by their chemical properties; however, the court explained it was the structure, not properties, to which the Analogue Act requirement refers.¹⁷²

Another test, the “visual inspection” method, compares the substances’ two-dimensional models for structural similarity.¹⁷³ Unchallenged as a generally accepted method, “substantial similarity” can be based on “visual comparisons of the molecular models combined with expert knowledge of chemistry.”¹⁷⁴ In *Brown*, the defendants appealed a

161. See Farrell, *supra* note 24, § 6.

162. *Forbes*, 806 F. Supp. at 238.

163. *Id.* at 237.

164. *Id.* at 239 (explaining that the U.S. attorneys’ office had declined to prosecute the defendant two years earlier because its chemist determined that the drug was not substantially similar to a controlled substance; however, later the U.S. attorney’s office arbitrarily pursued the case when new government prosecutors and DEA chemists had been hired).

165. See *id.*

166. *Brown*, *supra* note 32, at 460.

167. Sathappan, *supra* note 94, at 837–38.

168. *U.S. v. Klecker*, 348 F.3d 69, 73 (4th Cir. 2003).

169. *U.S. v. Klecker*, 228 F. Supp. 2d 720, 728 (E.D. Va. 2002).

170. *Id.*

171. *Id.*

172. *Id.*

173. Sathappan, *supra* note 94, at 837.

174. *U.S. v. Brown*, 415 F.3d 1257, 1267 (11th Cir. 2005).

judgment claiming the district court committed a *Daubert* error by admitting the government's two expert witnesses.¹⁷⁵ Explaining that evidentiary decisions are subject to an abuse-of-discretion standard of review, the Eleventh Circuit affirmed the district court's ruling.¹⁷⁶ Furthermore, the designer drug challenged in this case was found to convert into a controlled substance soon after ingestion, although the government's expert conceded that this was not sufficient in and of itself to establish a "substantial similarity."¹⁷⁷

Finally, there is the "structure and effect" test which looks at both the chemical structure of the drug and its psychological effects.¹⁷⁸ This test finds support in the legislative history and congressional intent of the Analogue Act's two-prong test.¹⁷⁹ By requiring both parts, this method is designed to "construe criminal statutes narrowly in favor of lenity to the accused."¹⁸⁰ Although different courts require varying degrees of compliance, the strictest demands that both determinations be met.¹⁸¹ Nonetheless, comparing the comment in *Brown* that the designer drug, once ingested, metabolizes into a controlled substance, the "structure and effect" test becomes blurred with the "visual inspection" test, becomes blurred when various parts are taken from each.¹⁸²

2. Structural Issues

Another weakness of the CSAEA is its statutory interpretation.¹⁸³ The difficulty turns on the correct reading of the three-part definition for a controlled substance analogue in Section 802 of the CSAEA.¹⁸⁴ Generally, the defendants have argued for a conjunctive reading, requiring the drug to have a substantially similar chemical structure to a controlled substance *and* either a similar effect to a scheduled substance or the intent that it have a similar effect.¹⁸⁵ Alternatively, the government has

175. *Id.* at 1264.

176. *Id.* at 1264–65, 1272–73.

177. *Id.* at 1262.

178. *United States v. Forbes*, 806 F. Supp. 232, 236 (D. Colo. 1992).

179. *Id.*

180. *Id.*

181. *United States v. Roberts*, 363 F.3d 118, 125 (2d Cir. 2004) ("Where there is only a two-atom difference between the relatively complex molecules of a suspect substance and of a controlled substance and where, upon ingestion, the suspect substance is metabolized into the controlled substance, we believe that the chemical structure of the suspect substance is manifestly 'substantially similar to the chemical structure of [the] controlled substance.'").

182. *See Brown*, *supra* note 32, at 462.

183. *See generally* *United States v. Hodge*, 321 F.3d 429 (3d Cir., 2003); *United States v. Washam*, 312 F.3d 926 (8th Cir. 2002) (discussing how the three-part definition of a controlled substance analogue should be read); *United States v. Clifford*, 197 F. Supp. 2d 516 (E.D. Va. 2002); *United States v. Vickery*, 199 F. Supp. 2d 1363 (N.D. Ga. 2002).

184. *See* 21 U.S.C. § 802(32)(A) (2012).

185. *Farrell*, *supra* note 24, § 16.

generally argued a disjunctive reading, pointing to the “or” immediately preceding the final clause.¹⁸⁶

The problem with a disjunctive reading, as the Court in *Clifford v. United States* pointed out, is that a defendant who represents that a pill containing ginseng and vitamin B is MDMA would satisfy the third prong of the statute, and therefore would be guilty of conspiring to possess and distribute a controlled substance analogue.¹⁸⁷ Other courts have concluded that a disjunctive reading would create absurd outcomes.¹⁸⁸ Without guidance from the Supreme Court, the appropriate reading lacks uniform authority; however, this issue is unlikely to be granted *certiorari* since no court has ruled in favor of the disjunctive interpretation.¹⁸⁹

3. How to Determine the *Scienter* Requirement?

Finally, the CSAEA has struggled with its *scienter* requirement.¹⁹⁰ Section 813 provides that any controlled-substance analogue “shall, to the extent intended for human consumption, be treated for the purposes of any federal law as a controlled substance.”¹⁹¹ Thus, under the CSA, it is generally “unlawful for any person knowingly or intentionally . . . to manufacture, distribute, or dispense, or possess with intent to manufacture, distribute, or dispense a controlled substance”¹⁹² The confusion stems from situations where a defendant is unaware that the substance he is dealing with mimics a controlled substance, in which case he would fail the knowledge requirement.¹⁹³

Until recently, district courts were split as to whether a strict *scienter* requirement was necessary at all.¹⁹⁴ Fortunately, in June, 2015, the Supreme Court clarified that “[w]hen the substance is an analogue, that knowledge requirement is met if the defendant knew that the substance was controlled . . . even if he did not know its identity.”¹⁹⁵ Justice Thomas clarified that “[a] defendant need not know of the existence of the Ana-

186. *United States v. Roberts*, No. 01 CR 410 RWS, 2001 WL 1646732, at * 2 (S.D.N.Y. Dec. 17, 2001).

187. *See Clifford*, 197 F. Supp. 2d at 518.

188. *See Vickery*, 199 F. Supp. 2d at 1371.

189. There are, however, two cases which have not reached the conjunctive interpretation. The first simply refused to decide the conjunctive/disjunctive issue since, in either event, the substance satisfied both subparagraphs. *United States v. Fisher*, 289 F.3d 1329, 1338 (11th Cir. 2002). The second case, determining the CSAEA was not unconstitutionally vague, incidentally recited the statute using disjunctive grammar. *United States v. Granberry*, 916 F.2d 1008, 1010 (5th Cir. 1990); *see also Farrell*, *supra* note 24, § 16.

190. *See Farrell*, *supra* note 24, § 6.

191. 21 U.S.C. § 813 (2012).

192. *Id.* § 841(a).

193. *Leonard*, *supra* note 9, at *2.

194. *United States v. Desurra*, 865 F.2d 651, 653 (5th Cir. 1989) (“If a defendant possesses an analogue, with intent to distribute or import, the defendant need not know that the drug he possesses is an analogue. It suffices that he know what drug he possesses, and that he possess it with the statutorily defined bad purpose.”).

195. *McFadden v. United States*, 135 S. Ct. 2298, 2302 (2015).

logue Act to know that he was dealing with ‘a controlled substance.’”¹⁹⁶ Thus, there are two circumstances where criminal liability would attach. First, liability attaches if a defendant is unaware of the identity of a particular substance he was distributing but knew it was a controlled substance. In this case, the defendant would have satisfied the knowledge requirement.¹⁹⁷ In the second case, if the defendant knew the identity of the substance but was unaware that it was scheduled—because mistake or ignorance of the law is not a viable defense—the knowledge requirement would be satisfied here as well.¹⁹⁸ This still leaves open the possibility that an individual selling an obscure and unscheduled analogue, unaware it mimics a controlled substance, could fail the knowledge requirement and escape liability.¹⁹⁹

At the end of the day, the Federal Analogue Act has withstood most structural challenges;²⁰⁰ however, the time it takes to obtain a judgment, the cost for expert witnesses, and the recurrent classification issues make this fix problematic.²⁰¹ No matter how much effort goes into amending the CSAEA, and closing the now smaller gap in designer drug legislation, a standards-based approach will require a case-by-case analysis for each defendant, regardless of prior “substantially similar” determinations.²⁰² Even after a favorable verdict, the government is still playing at a disadvantage since drug manufacturers can quickly introduce a new replacement designer drug.²⁰³

B. *The “SALTS Act” and Similar Proposed Amendments*

Senator Amy Klobuchar introduced the first Synthetic Abuse and Labeling of Toxic Substances Act (“SALTS Act”) in July 18, 2013, to cure certain vagueness defects.²⁰⁴ The proposed act specifically set out to determine “whether a controlled substance analogue was intended for human consumption,” which would amend Section 813 of the CSAEA.²⁰⁵ The act listed five factors to consider, including how the product is marketed; the known usefulness of the substance as marketed; its price; how it entered the market (through legitimate channels or otherwise); and

196. *Id.* at 2305.

197. *Id.* at 2304.

198. *Id.*

199. Leonard, *supra* note 9, at *2.

200. *See generally* Farrell, *supra* note 24.

201. Rannazzisi *Senate Hearing*, *supra* note 35, at 3.

202. Zunny Losoya, Note, *Synthetic Drugs—Emergence, Legislation, and the Criminal and Legal Aftermath of Broad Regulation*, 66 SMU L. REV. 401, 420 (2013) (“Nickel, Haag, and Beaudette currently confirm that the outcomes of criminal cases involving synthetics can be as unpredictable and varied as the substances themselves.”).

203. James Walsh, *Cops Just Can’t Keep up with Latest Designer-Drug Threats*, STAR TRIBUNE (Nov. 21, 2011, 2:53 PM), <http://www.startribune.com/cops-can-t-keep-up-with-latest-designer-drug-threats/134183833/>.

204. S. 1322 (113th): SALTS Act, GOVTRACK [hereinafter *SALTS Act*], <https://www.govtrack.us/congress/bills/113/s1322> (last visited Nov. 14, 2016).

205. *Id.*

whether the defendant knew or should have known that the substance was intended for human consumption.²⁰⁶ Further, the act states that “evidence that a substance was not marketed, advertised, or labeled for human consumption, by itself, shall not be sufficient to establish that the substance was not intended for human consumption.”²⁰⁷

Although the 2013 SALTS Act was not enacted,²⁰⁸ an amended SALTS Act was introduced to the Committee on the Judiciary on May 13, 2015.²⁰⁹ That committee will decide whether it should be sent to the House or Senate.²¹⁰ The only distinction between the 2015 act and its predecessor is a slight change in the language referencing the absence of a human consumption label, adding the lack of a label “shall not preclude the Government from establishing . . . that the substance was intended for human consumption.”²¹¹ The bill is predicted to have little success.²¹²

One reason the SALTS Act is unlikely to pass is because the Supreme Court has recently issued an opinion clarifying the *scienter* requirement of the CSAEA.²¹³ Although the opinion largely deals with the Section 841(a)(1) knowledge requirement, Justice Thomas explained that knowledge that the substance is or mimics a “controlled” substance can stem from the operation of Section 813 and 802(6)²¹⁴ of the CSAEA or knowledge of “the physical characteristics that give rise to that treatment.”²¹⁵ In other words, the knowledge requirement to manufacture, distribute, or possess an analogue substance would be satisfied if the defendant was aware of the similarities between the effects of the alleged

206. SALTS Act, S. 1322, 113th Cong. § 2(b) (as introduced by Senate, July 18, 2013) (“(b) Determination. – In determining whether a controlled substance analogue was intended for human consumption under subsection (a), the following factors may be considered, along with any other relevant factors:

- (1) The marketing, advertising, and labeling of the substance.
- (2) The known efficacy or usefulness of the substance for the marketed, advertised or labeled purpose.
- (3) The difference between the price at which the substance is sold and the price at which the substance it is purported to be or advertised as is normally sold.
- (4) The diversion of the substance from legitimate channels and the clandestine importation, manufacture, or distribution of the substance.
- (5) Whether the defendant knew or should have known the substance was intended to be consumed by injection, inhalation, ingestion, or any other immediate means.”).

207. *Id.* § 2(c) (as introduced by Senate, July 18, 2013).

208. *SALTS Act, supra* note 204.

209. *S. 1327: SALTS Act*, GOV TRACK, <https://www.govtrack.us/congress/bills/114/s1327> (last visited Mar. 7, 2017).

210. *Id.*

211. *Compare* S. 1327, 114th Cong. § 2(c) (as introduced by Senate, May 13, 2015), *with* S. 1322, 113th Cong. § 2(c) (as introduced by Senate, July 18, 2013).

212. *SALTS Act, supra* note 204 (analyzing the likelihood of the bill passing the committee and subsequently being enacted, govtrack.com suggested it has a 1% chance).

213. *See* discussion *supra* Section III.A.3.

214. 21 U.S.C. § 802(6) (2012) (“The term ‘controlled substance’ means a drug or other substance, or immediate precursor, included in schedule I, II, III, IV, or V of part B of this subchapter. The term does not include distilled spirits, wine, malt beverages, or tobacco, as those terms are defined or used in subtitle E of the Internal Revenue Code of 1986.”).

215. *McFadden v. United States*, 135 S. Ct. 2298, 2306 (2015).

analogue substance and a controlled one. Because both the Supreme Court and Congress in this instance have the same objective, and the Supreme Court's interpretation is binding on both federal and state courts, unless more explanation were necessary, it is unlikely that Congress would find the need to justify amending Section 813 of the CSAEA.²¹⁶

To be fair, the defendant in *McFadden v. United States* never argued that the "bath salts" he distributed were not intended for human consumption. Rather, he argued that he was unaware that they were regulated as controlled-substance analogues in the first place.²¹⁷ A number of cases illustrate, however, that courts will infer the human-consumption requirement irrespective of the language listed on the substances packaging.²¹⁸ That being said, there is a purpose to Section 813: "[t]his intent requirement sufficiently constrains law enforcement officials and discourages arbitrary or discriminatory application of the law."²¹⁹ Essentially, without the human-consumption language, possession of a substance for a benign purpose would be criminal, eliminating the legitimate use of certain chemicals.²²⁰ Because Section 813's purpose is furthered by judicial interpretation and for the most part, case law has closed the human consumption loophole, the SALTS Act, even if enacted, would be of little help to solve the designer-drug problem.

The SALTS Act was not the first, and certainly not the last, attempt to help solve the issues surrounding designer drugs.²²¹ The Synthetic Cathinones Control Act of 2013 ("SCCA"), introduced in January of 2013, provided for the placement of fifteen synthetic drugs on schedule I of the CSA.²²² In May of 2013, House Representative André Carson introduced the Synthetics are Dangerous Act ("SDA"), with the goal to amend the Office of National Drug Control Policy Reauthorization Act of 1998 to allow education of the dangers of designer drugs through the

216. Neal Devins, *Congressional Responses to Judicial Decisions*, in *ENCYCLOPEDIA OF THE SUPREME COURT OF THE UNITED STATES* 400, 403 (Mark Graber et al. eds., 2008), <http://scholarship.law.wm.edu/facpubs/1633/> (describing how, in certain circumstances, Congress will affirmatively assist in implementing the Supreme Court's decision; however this has occurred in the past in response to resistance to school desegregation, an area that the government needed to step in for the sake of justice and equality).

217. It's possible the "human consumption" argument was not raised because the term "bath salts" indicated the product is similar to one purchased at a health and body store and clearly not for human consumption. More likely, though, the defendant knew that the human consumption argument was weaker than attacking Section 841(a)(1), and his lack-of knowledge that it was a controlled substance analogue. *McFadden*, 135 S. Ct. at 2300.

218. See *United States v. Sullivan*, 714 F.3d 1104, 1107–08 (8th Cir. 2013) ("A label indicating a substance is not for human consumption is not dispositive evidence of the distributor's intent."); *United States v. Desurra*, 865 F.2d 651, 654 (5th Cir. 1989); Farrell, *supra* note 24, § 2(a) ("[A]n allegation in the indictment that the drugs were analogues of controlled substances was an adequate allegation that the drugs were intended for human consumption, as 'controlled substance analogue' was defined so that a drug was an analogue only if it was intended for human consumption.").

219. *United States v. Hofstatter*, 8 F.3d 316, 322 (6th Cir. 1993).

220. See *id.*

221. See S. Res. 389, 113th Cong. (2014) (enacted); S. 36, 114th Cong. (2015); H.R. 2148, 113th (2013); H.R. 315, 113th Cong. (2013).

222. H.R. 315.

national youth antidrug media campaign.²²³ Both the SCCA and SDA were referred to subcommittees shortly after their introduction in 2013, but have since died in Congress.²²⁴

Although the SCCA and SDA did not gain traction, one bill, Protecting Our Youth from Dangerous Synthetic Drugs Act of 2015 (“2015 Act”), attempts to significantly modify the aforementioned loopholes under the CSAEA.²²⁵ First, it would modify the structure of the three-part definition of a controlled-substance analogue from Section 802 such that it unambiguously necessitates a conjunctive reading.²²⁶ The bill defines a “controlled substance analogue” as:

(i) a substance whose chemical structure is substantially similar to the chemical structure of a controlled substance in schedule I or II—

(I) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or

(II) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II; or

(ii) a substance designated as a controlled substance analogue by the Controlled Substance Analogue Committee in accordance with section 201(i).²²⁷

By adjusting the spacing and changing the numbers of the definition’s components, the 2015 Act provides for a consistent, sound, and foolproof conjunctive reading.

Second, the 2015 Act would provide an additional method for defining an analogue.²²⁸ Section 2(a)(2) establishes a Controlled Substance Analogue Committee (“Committee”), led by the DEA and comprised of scientific experts from the DEA, National Institute on Drug Abuse, Centers for Disease Control and Prevention, and any additional federal agency the attorney general finds appropriate.²²⁹ Following strict proce-

223. H.R. 2148.

224. *Summary: S.36—114th Congress (2015–2016)*, CONGRESS.GOV, <https://www.congress.gov/bill/114th-congress/senate-bill/36?q=%7B%22search%22%3A%5B%22s36%22%5D%7D&r=1> (last visited Mar. 7, 2017).

225. *Id.*

226. Although it is worth noting, the proposed bill, as introduced, suggests amending Section 102(32), a nonexistent provision. It should read to amend Section 802(32). S. 36, 114th Cong. § 2(a)(1)(A).

227. *Id.*

228. *Id.* § 2(a)(1)(A)(ii).

229. *Id.* § 2(a)(2).

dural guidelines outlined in the 2015 Act, if the Committee designates a substance as a controlled analogue, such designation will take effect thirty days after its publication in the Federal Register.²³⁰ Furthermore, if the substance were subsequently scheduled under the CSA, it would be removed from the analogue list.²³¹ The Committee, in effect, would end the inefficiencies associated with independent prosecutions for the same synthetic substance. This approach would also blend the rules-based tactic from the CSA and standards-based approach from the CSAEA, allowing for the integration of certain listed substances under the CSAEA.²³²

Aside from the practical benefits that the Committee would provide, including greater ease prosecuting defendants under the CSAEA, the 2015 Act affords the Committee greater discretion in defining analogues.²³³ To designate an analogue, the Committee must determine whether the substance is “[s]imilar to a schedule I or II controlled substance in either its chemical structure or its predictive effect on the body, in such a manner as to make it likely that the substance will, or can be reasonably expected to have a potential for abuse.”²³⁴ This subsection eliminates the word “substantially,” which, by itself, creates less restrictive means for defining an analogue. The 2015 Act does more, however, by describing how the substance may be considered a controlled substance analogue if it is *either* chemically similar to *or* has a similar predictive effect on the body of a schedule I or II controlled substance.²³⁵ This means if the drug is less effective than the scheduled substance it intends to mimic, but was predicted to have a similar effect or designed for such purpose, it may still be considered an analogue.²³⁶ This language provides the Committee, and consequently the federal government, with the ability to circumvent “substantially similar” confusion and legal challenges.

Finally, the 2015 Act, through Committee designation, eliminates the “human consumption” *scienter* requirement in Section 813 of the CSAEA.²³⁷ As part of the Committee’s process, “[e]vidence of human consumption by an individual or the public at large is not necessary”²³⁸ Although this aspect of the CSAEA has, for the most part, been settled,²³⁹ the 2015 Act closes any further gap and allows the government to get a head start by treating the problem before it is too late. The 2015 Act was introduced in the Senate on January 6, 2015, and has since been referred to the Senate committee;²⁴⁰ it has twelve cosponsors.

230. *Id.* § 2(a)(2)(i)(6).

231. *Id.* § 2(a)(2)(i)(7).

232. *See* Kau, *supra* note 21, at 1099–1100.

233. S. 36, 114th Cong. § 2(a)(2)(i)(3).

234. *Id.* § 2(a)(2)(i)(3)(B).

235. *Id.*

236. *Id.*

237. 21 U.S.C. § 813 (2012); S. 36, 114th Cong. § 2(a)(2)(i)(3)(C).

238. S. 36, 114th Cong. § 2(a)(2)(i)(3)(C).

239. *See* discussion *supra* Section III.A.3.

240. *Summary: S.36—114th Congress (2015–2016)*, *supra* note 224.

A related bill, under the same title with identical language, was introduced in the House of Representatives on December 10, 2015; it was referred to a House subcommittee on July 15, 2016.²⁴¹

Although these bills are far from enactment, one resolution, though by its nature it does not have the authority of law, has been reached.²⁴² On March 13, 2014, Senator Klobuchar, who introduced the SALTS Act, introduced a resolution naming the second week of March “National Youth Synthetic Drug Awareness Week.”²⁴³ The resolution simply “urges communities to carry out appropriate programs and activities to educate parents and youth about the dangers associated with synthetic drug abuse.”²⁴⁴ Although the resolution adds nothing to the CSAEA, it demonstrates Congress’ continuous effort to eradicate the problems associated with synthetic-drug consumption and suggests the importance of education.²⁴⁵

C. State Action

Because the CSAEA is currently ineffective, either too slow to react to the production and abuse of designer drugs or simply unable to classify a particular substance as a controlled analogue, states have taken measures of their own.²⁴⁶ Most states have banned synthetic drugs by individually scheduling substances under their state laws.²⁴⁷ Virginia, for example, made it a crime in 2011 to sell or possess synthetic marijuana containing any of ten chemicals usually found in similar derivatives.²⁴⁸ It should come as no surprise that shortly after the ban, three of the largest raids for synthetic marijuana in Virginia were unsuccessful, since the chemicals contained in those packages were outside the ten listed by the state.²⁴⁹ Regardless of these obstacles, at least forty-three states have enacted legislation to control synthetic cannabinoids, and at least forty-four states have done the same for synthetic cathinones.²⁵⁰

Some states, in conjunction with individual bans, have instituted general prohibitions to encompass a designer drug’s common chemical makeup.²⁵¹ Colorado’s criminal code, which prohibits synthetic cannabinoids, defines them as “any chemical compound that is chemically syn-

241. *Cosponsors: S.36—114th Congress (2015–2016)*, CONGRESS.GOV, <https://www.congress.gov/bill/114th-congress/senate-bill/36/cosponsors> (last visited Mar. 7, 2017).

242. S. Res. 389, 113th Cong. (2014) (enacted).

243. *Id.*

244. *Id.*

245. *Id.*

246. Jake Schaller, *Not for Bathing: Bath Salts and the New Menace of Synthetic Drugs*, 16 J. HEALTH CARE L. & POL’Y 245, 263 (2013).

247. Amber Widgery, *Synthetic Drug Threats*, NAT’L CONFERENCE OF STATE LEGISLATURES (Jan. 13, 2015), <http://www.ncsl.org/research/civil-and-criminal-justice/synthetic-drug-threats.aspx>.

248. Schaller, *supra* note 246, at 264.

249. Justin Jouvenal, *Laws Fail to Keep Pace with Synthetic Marijuana*, WASH. POST, Dec. 29, 2011, at A14.

250. *Synthetic Drugs*, *supra* note 20.

251. Widgery, *supra* note 247.

thesized and either: (I) Has been demonstrated to have binding activity at one or more cannabinoid receptors; or (II) Is a chemical analog or isomer of a compound that has been demonstrated to have binding activity at one or more cannabinoid receptors.”²⁵² Using a similar system, Rhode Island schedules entire structural classes of chemical compounds.²⁵³ To accomplish this task, the Rhode Island Synthetic Drug Ban prohibits entire molecular groups containing particularly listed core structures.²⁵⁴ Even with such a broad policy, Rhode Island continues to struggle with regulating designer drugs, as evidenced by pending bills to amend the law and make currently unregulated synthetic compounds illegal.²⁵⁵

Finally, the National Alliance for Model State Drug Laws released a report on October 30, 2012, indicating that thirty-four states have analogue-drug laws.²⁵⁶ For the most part, these analogue laws require substantial similarity in either chemical structure or pharmacological effects to a scheduled substance.²⁵⁷ Although many states have taken a proactive approach to amend their laws and react to the changes in designer drugs, similar issues surrounding substantial similarity and notice have derailed these efforts.²⁵⁸ Aside from Rhode Island’s novel approach, most states have adopted a combination of ideas from the CSA and Analogue Act;²⁵⁹ however, more needs to be done at the federal level to curtail the wave of synthetic drugs.

D. *Similar Problems Across the Globe*

From outright bans to total decriminalization, synthetic drugs have been approached using different techniques from country to country.²⁶⁰ Although there have been efforts to decriminalize drug use and possession in the United States, particularly with marijuana, it is highly unlikely that Portugal’s full-scale decriminalization system would make its way to the states.²⁶¹ In a March 2015 interview, President Obama observed that

252. COLO. REV. STAT. § 18-18-102(34.5)(a) (2014).

253. Sathappan, *supra* note 94, at 842.

254. 21 R.I. GEN. LAWS § 21-28-2.08(h)–(i)(4) (2015); Sathappan, *supra* note 94, at 842–43.

255. See S.B. 507, 2015 Leg., Gen. Assemb., Jan. Sess. (R.I. 2015).

256. NAT’L ALLIANCE FOR MODEL ST. DRUG LAWS, CONTROLLED SUBSTANCE ANALOGS STATUTORY COMPARISON AND COMPILATION (2012), <http://www.namsdl.org/library/7C341200-1C23-D4F9-74CEC9BE0E87F653/>; Widgery, *supra* note 247.

257. Widgery, *supra* note 247.

258. Losoya, *supra* note 202, at 418–20 (“Although several news outlets heavily publicized the ban, neither the media nor the state ever publicized a complete list of the exact seven substances that were criminalized until the October 2010 state code publication.”).

259. NAT’L ALLIANCE FOR MODEL ST. DRUG LAWS, AN INTRODUCTION TO SYNTHETIC DRUGS (2012), <http://www.namsdl.org/library/E2E2CCF3-1372-636C-DD41956657861165/>.

260. See *supra* Section II.D.

261. Chris Boyette & Jacque Wilson, *It’s 2015: Is Weed Legal in Your State?*, CNN (Jan. 7, 2015, 8:09 AM), <http://www.cnn.com/2015/01/07/us/recreational-marijuana-laws/>; Liz Fields, *Obama Talks to VICE News About Climate Change, Marijuana Legalization, and the Islamic State*, VICE NEWS (Mar. 16, 2015, 3:20 PM), <https://news.vice.com/article/obama-talks-to-vice-news-about-climate-change-marijuana-legalization-and-the-islamic-state>.

there is a possibility of marijuana decriminalization as more states legalize the substance.²⁶² He explained that the cost of incarceration for non-violent offenders coupled with the revenue from taxing the industry, estimated at \$10 billion a year, make a strong argument for not just decriminalization, but also legalization.²⁶³

More countries are considering the idea of decriminalization, including Ireland, which currently has a blanket ban on psychoactive substances.²⁶⁴ Ireland's drug minister announced that the country was decriminalizing the personal use and possession of heroine, cocaine, and marijuana in 2016.²⁶⁵ This shift in policy stems from the "tire of the fallout from the war on drugs driven by U.S. policy."²⁶⁶ Ireland also intends to focus its efforts on helping users by providing a safe environment, including the availability of medically supervised injection rooms in Dublin, which has the support of local law enforcement.²⁶⁷

While the idea of decriminalization is gaining popularity,²⁶⁸ many countries, such as Canada, continue to fight the battle against synthetics.²⁶⁹ The Canadian Controlled Drugs and Substances Act works comparably to the CSA, with each illegal drug specifically spelled out.²⁷⁰ Currently, Canada is stuck playing a "cat and mouse" game, leaving the legality of unscheduled designer drugs "open to interpretation of the Act."²⁷¹ Some of Canada's leading experts in drug policy formed the Canadian Drug Policy Coalition in 2011 and developed a new approach.²⁷² It involves education, an end to criminalization, and the promotion of human rights for individuals who use drugs.²⁷³ While the Coalition's attitude

262. Fields, *supra* note 261.

263. *Id.*

264. Barrett, *supra* note 125.

265. Kitty Holland, *Injection Rooms for Addicts to Open Next Year in Drug Law Change, Says Minister*, IRISH TIMES (Nov. 2, 2015, 1:00 AM), <http://www.irishtimes.com/news/ireland/irish-news/injection-rooms-for-addicts-to-open-next-year-in-drug-law-change-says-minister-1.2413509>.

266. Carimah Townes, *Irish Government to Decriminalize Heroin, Cocaine, and Marijuana*, THINKPROGRESS (Nov. 4, 2015), <https://thinkprogress.org/irish-government-to-decriminalize-heroin-cocaine-and-marijuana-4aba6c2876e#a23usagky>.

267. Henry McDonald, *Irish Police Back Decriminalising Personal Possession of Heroin*, GUARDIAN (Nov. 16, 2015, 12:13 PM), <http://www.theguardian.com/world/2015/nov/16/irish-police-back-decriminalising-personal-possession-of-heroin>.

268. See DRUG POL'Y ALLIANCE, APPROACHES TO DECRIMINALIZING DRUG USE AND POSSESSION 1 (Feb. 2015) [hereinafter APPROACHES TO DECRIMINALIZING], https://www.unodc.org/documents/ungass2016/Contributions/Civil/DrugPolicyAlliance/DPA_Fact_Sheet_Approaches_to_Decriminalization_Feb2015_1.pdf.

269. Alan L. Hudson et al., *Ecstasy, Legal Highs and Designer Drug Use: A Canadian Perspective*, 0(0) DRUG SCI. POL'Y & L. 1, 5 (2014) ("Although once legal in Canada, there have been several seizures and prosecutions of persons attempting to export these same substances from Canada into the US, where BZP and TFMPP have been banned for several years.")

270. *Id.* at 3 ("In summary, the Canadian Controlled Drugs and Substances Act (S.C. 1996, c. 19) has been amended to take into account some of the emerging new psychoactive substances such as the piperazines and methylenedioxypyrovalerone by specifically naming them in the Act.")

271. *Id.* at 6.

272. Eugene Oscapella, *Changing the Frame: A New Approach to Drug Policy in Canada*, CANADIAN DRUG POL'Y COALITION, Jan. 2012, at 6.

273. *Id.* at 21, 23.

follows a progressive model, Canadian law appears just as murky as the United States’.

IV. RECOMMENDATION

A. *Amend the CSAEA*

At the heart of the designer drug “cat-and-mouse” game is the inability of the CSAEA to define a controlled-substance analogue.²⁷⁴ Without a clear definition, the government faces an endless, uphill battle of having to determine criminal liability for the same substance one case at a time.²⁷⁵ By adopting the 2015 Act’s approach to synthetic drug classification, the government could both avoid duplicative litigation as well as list controlled-substance analogues before they become a problem.²⁷⁶ The 2015 Act would establish a committee, comprised of numerous governmental agencies and directed by the DEA, with the power to designate a substance as a controlled analogue.²⁷⁷ This would allow the committee’s determinations to operate as precedent, similar to scheduling, and would streamline the judicial process for convicting an individual of manufacturing, distributing, or possessing such substance.

There are other ways to accomplish this objective; one way, involving less administrative work, would be to extend emergency scheduling indefinitely. Currently, the attorney general has the power to schedule substances deemed “necessary to avoid an imminent hazard to the public safety.”²⁷⁸ For this route to be effective, however, the requirements for emergency scheduling need to be loosened. Where the 2015 Act can list a substance without any findings of past and current abuse, emergency scheduling requires findings of both.²⁷⁹ In either case, substances determined to be analogues would need to be announced (which both the statute and act have procedures in place) to satisfy Due Process concerns.²⁸⁰

Finally, any determination would necessarily have to be subject to challenge and *per se* exemptions. On one hand, the DEA, or whomever is making these determinations, may make a mistake. In fact, in 2002, the DEA opined that *salvia divinorum* was considered an analogue when in

274. Cohen, *supra* note 14, at 165.

275. *Rannazzisi Senate Hearing*, *supra* note 35, at 23.

276. *See supra* Section III.B.

277. S. 36, 114th Cong. § 2(a)(2)(i) (2015).

278. 21 U.S.C. § 811(h)(1) (2012); *Rannazzisi Senate Hearing*, *supra* note 35, at 10.

279. 21 U.S.C. § 812(c); S. 36, 114th Cong. § 2(a)(3) (2015) (“(B) A substance may be designated as a controlled substance analogue by the Committee under this subsection if the substance is determined by the Committee to be similar to a schedule I or II controlled substance in either its chemical structure or its predictive effect on the body, in such a manner as to make it likely that the substance will, or can be reasonably expected to have a potential for abuse.”).

280. Kau, *supra* note 21, at 1113 (“A declaration from the DEA that the federal government will treat certain chemicals as analogs provides both fair notice and sufficient deterrence to all but the most foolhardy individuals.”).

actuality it shared no resemblance to any schedule I or II substance.²⁸¹ In this case, the DEA overstated its authority and, had they determined salvia in fact was an analogue instead of simply providing an opinion, that determination would need to be subject to review. The ability to challenge a chemical's classification would also take care of any overregulated substance that might result from the 2015 Act's looser classification standards.²⁸² In addition to mistake, legitimate medical research would otherwise be hindered without the ability to test and manipulate certain chemical compounds.²⁸³ By recognizing the need for a better method to define dangerous synthetic drugs, while allowing those who use it for a legitimate purpose to apply for an exemption, the government, and society as a whole, will be better off.

Notwithstanding efforts to define specific analogue substances, the inherent nature of listing compounds one at a time, as we have seen with the CSA, by itself is ineffective. As part of increasing the authority and ability to classify analogues, the definition of a controlled analogue must be amended to deal with novel substances. First, the CSAEA's "substantially similar" language permits arbitrary and inconsistent results. With three different tests floating in various federal courts, and the need for expensive expert witnesses, the "substantially similar" language needs revision.²⁸⁴

There is always a need for consistency; therefore, one of the three tests should be selected and then incorporated into the statute itself. Although the "visual inspection" method is generally accepted, it relies heavily on expert witnesses and ignores the drug's psychological effects.²⁸⁵ Meanwhile, the "core arrangement" method has led to opposite conclusions from accredited experts.²⁸⁶ Because the CSAEA requires both a similar chemical structure as well as an actual or intended psychological effect on the user, the "structure and effect" test is most consistent with congressional intent.²⁸⁷ Any one test would suffice, as long as it were implemented universally; however, the "structure and effect" test is the most comprehensive and fits closest to the language of the statute.

Next, the human-consumption requirement should be revised consistent with the 2015 Act. Although many advocates are in favor of dropping the human-consumption requirement entirely,²⁸⁸ its absence would risk arbitrary and discriminatory enforcement of the law, as well as elimination of legitimate use.²⁸⁹ Although the Supreme Court has, to a large extent, settled the *scienter* requirement, adopting the 2015 Act's "human

281. *Id.* at 1114.

282. S. 36, 114th Cong. § 2(a)(2) (2015).

283. Berendt, *supra* note 124.

284. *See supra* Section III.A.1.

285. *Id.*

286. *United States v. Klecker*, 228 F. Supp. 2d 720, 728 (E.D. Va. 2002).

287. *See supra* Section III.A.1.

288. Sathappan, *supra* note 94, at 844.

289. *United States v. Hofstatter*, 8 F.3d 316, 321–22 (6th Cir. 1993).

consumption” amendment would provide additional means to determine intent and possibly hold liable the naïve drug dealer or manufacturer who is unaware of the effect his products generate.²⁹⁰

Finally, the CSAEA should adopt broader restrictive tests, similar to Rhode Island’s approach. In addition to scheduling specific chemical compounds, scheduling structural classes would encompass many of the synthetic drug’s variations, which clandestine chemists so carefully tweak.²⁹¹ This approach would save resources as well since the DEA could research an entire structural class and subsequently schedule it, as opposed to researching one substance at a time.²⁹² If a substance fell under a banned structural class, proving “substantial similarity” would be incredibly easy.²⁹³ One downfall to this approach, however, aside from it potentially being over-inclusive (in which case, it would be subject to an appeal), is that it cannot penalize drugs which consist of new structural classes.²⁹⁴ Always an inherent problem in attempting to schedule substances and structural classes, the Rhode Island approach may better serve to strengthen the current safeguards against designer drugs.

B. Re-evaluate Drug Scheduling

Because the vast majority of designer drugs, such as “Spice” and “K2,” are intended to mimic cannabis²⁹⁵—a schedule I drug—researching marijuana and its analogues is especially difficult.²⁹⁶ Scientists are “uniformly pessimistic with regard to human studies ever proceeding with Schedule I compounds.”²⁹⁷ Marijuana is even more difficult to research, requiring both a DEA-issued license and that the particular study be approved by the FDA.²⁹⁸ Further, when it comes to obtaining cannabis, authorization is also required by the National Institute on Drug Abuse, a difficult hurdle by itself.²⁹⁹ Oddly enough, the DEA has acknowledged evidence supporting the medicinal use of cannabinoids, but because the tests stopped at phase I, the DEA concluded that the data was inade-

290. Leonard, *supra* note 9, at *2.

291. Sathappan, *supra* note 94, at 843.

292. *Id.* at 847.

293. *Id.* at 848.

294. *Id.*

295. Cohen, *supra* note 14, at 167.

296. Annaliese Smith, *Marijuana As a Schedule I Substance: Political Ploy or Accepted Science?*, 40 SANTA CLARA L. REV. 1137, 1160 (2000).

297. Rick J. Strassman, *Human Hallucinogenic Drug Research in the United States: A Present-Day Case History and Review of the Process*, 23(1) J. PSYCHOACTIVE DRUGS 29, 29 (1991).

298. Shaunacy Ferro, *Why It's So Hard for Scientists to Study Medical Marijuana*, POPULAR SCIENCE (Apr. 18, 2013), <http://www.popsci.com/science/article/2013-04/why-its-so-hard-scientists-study-pot>; see also Alex Kreit, *Controlled Substances, Uncontrolled Law*, 6 ALB. GOV'T L. REV. 332, 354–55 (2013) (“Between 2000 and 2009, the federal government approved only eleven research projects into marijuana’s value as a medicine, fewer than the number of states that passed medical marijuana laws during that same period.”).

299. Ferro, *supra* note 298.

quate to warrant rescheduling.³⁰⁰ Equally puzzling, Marinol, a synthetic pill containing THC (the active ingredient in marijuana), is listed as a schedule III substance.³⁰¹ Without an explanation for what qualifies as “currently accepted medical use in treatment in the United States,” this issue has been litigated more than any of the other CSA scheduling criteria.³⁰²

By making synthetic cannabinoids a schedule I drug, scientists are facing the same hurdles researching these compounds as they faced with cannabis.³⁰³ As a result, not only are users unable to make a more educated decision before consuming the compound, the medical community is also unaware of which chemicals were consumed.³⁰⁴ The information that is typically available is from case studies of patients who reported using the substance, not scientific testing on the compounds themselves.³⁰⁵

C. *Legalize It*

An alternative argument can be made for the outright legalization of cannabis. The Drug Policy Alliance released a report in March of 2015 reflecting changes since Colorado passed its 64th Amendment to legalize marijuana in the state. One positive, relevant change—synthetic marijuana arrests have declined by 50%.³⁰⁶ The report speculates that because marijuana is a more established and understood compound, individuals have less of an incentive to use synthetics.³⁰⁷ Meanwhile, since most synthetic cannabinoids are typically designed to enhance the effects of cannabis, often with adverse side effects, legalizing the latter would reduce users’ negative side effects from synthetic cannabinoids by directing them to the natural alternative.³⁰⁸

This logic could be extrapolated to legalize the illicit drugs that designer drugs intend to mimic, similar to Portugal’s decriminalization regime.³⁰⁹ For a number of reasons, that argument is flawed. First of all, the

300. Kreit, *supra* note 298, at 354.

301. *Id.* at 349.

302. *Id.* at 350; 21 U.S.C. § 802(28) (2012) (showing that the “United States” is the only defined term in the clause).

303. Gwynne, *supra* note 19; see 21 U.S.C. § 823(f) (discussing more detailed restrictions for schedule I substances compared to schedules II–V).

304. Gwynne, *supra* note 19.

305. See Travis S. Heath et al., *Acute Intoxication Caused by a Synthetic Cannabinoid in Two Adolescents*, 17 J. PEDIATR. PHARMACOL. THER. 117 (2012) (discussing the limited clinical testing for these compounds and the benefits of such tests).

306. Press Release, Drug Policy Alliance, *New Report Provides Comprehensive Data on Marijuana Arrests and Charges in Colorado After Legal Regulation for Adult Use* (Apr., 24 2015) [hereinafter *Press Release*], http://www.drugpolicy.org/sites/default/files/Colorado_Marijuana_Arrests_After_Amendment_64.pdf.

307. *Id.*

308. Joasia Luzak, *Synthetic Marijuana Not a “Medical Product,”* 5 EUR. J. RISK REG. 548, 548 (2014).

309. Ingraham, *supra* note 132.

United States is very different from Portugal. From our government's organization to our economy, population, and size, it would be impossible to predict the likelihood of decriminalization's success based on Portugal's experience.³¹⁰ Second, many illicit drugs carry very harmful effects, including sudden death.³¹¹ Meanwhile, marijuana has numerous medicinal uses³¹²—it is medicinally legal in twenty-eight states and recreationally legal in eight.³¹³ This is likely, in part, because studies have shown that marijuana has no known dangerous physical reaction and no long-term injury to the brain.³¹⁴ Until that can be said of other illicit substances, legalizing, or even decriminalizing them, would be inconsistent with arguments for marijuana's legalization.

That being said, there are benefits to decriminalizing or legalizing marijuana. First, the government stands to save money on law enforcement resources that no longer need to be devoted to marijuana law enforcement.³¹⁵ In addition, the judicial system would benefit as well, as it would be less burdened with drug-related crimes.³¹⁶ Those who would otherwise be convicted as criminals for possession would be free to lead normal lives, which in turn would lower the costs of incarceration.³¹⁷

If marijuana were legalized, not simply decriminalized, the government would likely gain substantial tax revenue as well.³¹⁸ Although legalization is the most extreme option, decriminalization is more likely, and has been endorsed by many organizations.³¹⁹ The Drug Policy Alliance wrote a report in 2016 suggesting various approaches to decriminalization, including a concurrent investment in abuse treatment and harm reduction services.³²⁰ They stated that, in countries where decriminalization has taken place, there have been no “significant increases in drug use,

310. COUNTRY FACTS, <http://country-facts.findthedata.com/compare/1-35/United-States-vs-Portugal> (last visited Mar. 7, 2017).

311. See *Cocaine Use and Its Effects*, WEBMD, <http://www.webmd.com/mental-health/addiction/cocaine-use-and-its-effects?page=2#2> (last visited Nov. 15, 2016); *Heroin: What You Need To Know*, WEBMD, <http://www.webmd.com/mental-health/addiction/heroin-use?page=2#2> (last visited Nov. 15, 2016); *Crystal Meth: What You Should Know*, WEBMD, <http://www.webmd.com/mental-health/addiction/crystal-meth-what-you-should-know> (last visited Mar. 7, 2017).

312. Smith, *supra* note 296, at 1156.

313. Sara 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>.

314. Smith, *supra* note 296, at 1167.

315. *Marijuana Legalization in Washington State: One-Year Status Report*, DRUG POLICY ALLIANCE (July 6, 2015), <http://www.drugpolicy.org/news/2015/07/marijuana-legalization-washington-state-one-year-status-report> (referencing Washington one year after legalizing marijuana, “[t]he state is now saving millions of dollars in law enforcement resources that were previously used to enforce marijuana laws”).

316. Ranjit Dighe, *Legalize It—The Economic Argument*, HUFFINGTON POST (Apr. 1, 2014, 1:17 PM), http://www.huffingtonpost.com/ranjit-dighe/legalize-marijuana-economic-argument_b_4695023.html.

317. *Id.*

318. Fields, *supra* note 261 (“Nationwide, it is estimated that a taxed and regulated marijuana industry could take in some \$10 billion for the government in coming years.”).

319. APPROACHES TO DECRIMINALIZING, *supra* note 268.

320. *Id.*

drug-related harm or crime”³²¹ Further, the study indicates that there is little visible relationship between sanctions prescribed for drug use and the frequency of individuals using those substances.³²² If the goal is to reduce the prevalence and use of synthetic drugs, legalizing marijuana would certainly help.

D. Educate the Community

It must be realized that, regardless of their legality, there will always be a market for designer drugs.³²³ While some would only partake if it were legal, others will consume regardless of the legality.³²⁴ The government does not have to condone designer drugs to reach this realization. If the true goal of prosecution is to keep people safe (and maybe collect taxes too), then education must be part of the plan. Education includes aggregating legitimate research from federal, state, and local communities, in addition to utilizing online forums where users report their firsthand experiences with certain designer drugs.³²⁵ Part of the education process includes allowing the user to make an informed decision. For example, certain products, such as “bunk test kits” and similar alternatives, are available for users to determine what drug they are ingesting.³²⁶

One argument against education, as opposed to encouraging individuals to abstain from drug use, is that it may convey the message that the government condones drug use. This reasoning, although logical, has proven inaccurate, as evidenced by the Drug Abuse Resistance Education (“D.A.R.E.”) program’s counterproductive results.³²⁷ In fact, studies have shown teens who finished the D.A.R.E. program were more likely to smoke cigarettes and drink alcohol than those who had not gone through the program.³²⁸ Some key deficiencies in the D.A.R.E program included its short duration, minimal active interaction between instructors and students, and insignificant to no social interaction amongst peers.³²⁹ To be fair, this does not indicate that an abstention program will be ineffective; in fact, it suggests this particular program *could* have been effective given certain modifications. Looking at the history of abstinence instruction in sexual education, however, most of those programs

321. *Id.*

322. *Id.*

323. NATIONAL DRUG THREAT ASSESSMENT SUMMARY, *supra* note 47, at 18.

324. *See Press Release, supra* 306.

325. One such report shows cumulative efforts to discover synthetic drug effects on users and the switch to synthetic drugs. National Institute on Drug Abuse, 2012 NIDA International Forum: New and Emerging Psychoactive Substances: Second Interdisciplinary Forum, DRUGABUSE.GOV (June 8–11, 2012), <http://www.drugabuse.gov/international/2012-nida-international-forum-new-emerging-psychoactive-substances-second-interdisciplinary-forum>.

326. BUNK POLICE, <http://bunkpolice.com> (last visited Mar. 7, 2017).

327. Scott O. Lilienfeld & Hal Arkowitz, *Why “Just Say No” Doesn’t Work*, SCIENTIFIC AMERICAN (Jan. 1, 2014), <http://www.scientificamerican.com/article/why-just-say-no-doesnt-work/>.

328. *Id.*

329. *Id.*

have been found ineffective at both delaying sexual activity and reducing teen pregnancy.³³⁰

The risk of an educational program creating adverse results, as we have seen with the D.A.R.E. program, is a real concern. That being said, it does not seem to be a big enough concern to eliminate education all together.³³¹ In fact, we have seen positive results with many anti-drug educational campaigns, such as the Georgia Meth Project, which spent \$4 million on an advertising campaign depicting real stories of people who had tried meth.³³² A year after the start of the campaign, a survey found an 11% increase in teenagers who believed there was a “great risk” in taking meth, even once.³³³ It should come as no surprise that there are numerous initiatives currently in place designed to create synthetic-drug awareness, including “National Youth Synthetic Drug Awareness Week,” which Congress approved in 2014.³³⁴ In addition, the National Drug Control Policy promotes both prevention and treatment initiatives, encourages the dissemination of information between state agencies, and provides online tools for finding a treatment center and obtaining drug- and alcohol-related information.³³⁵

Education is crucial for getting a handle on designer drugs. Whatever the program, it must include the necessary tools to inform potential users of the harms associated with designer drugs, of how (if at all) one can safely consume these drugs, and where to find treatment centers. In addition, our government must continue its efforts to aggregate and share information amongst the states, as well as other countries. The more we know about synthetic drugs, the easier they will be to address.

V. CONCLUSION

Synthetic drugs are a very real problem in the United States and across the globe. Individuals looking for a “legal” high are doing so at a substantial risk, sometimes resulting in death. The United States’ response, which started with the Controlled Substances Act and later included an Analogue Act to outlaw synthetic substances, is too slow to react to the clandestine chemists who are manufacturing these chemicals (many times overseas). As a result, the federal government is playing at a disadvantage, unable with current legislation to catch up and put an end

330. *The Truth About Abstinence-Only Programs*, ADVOCATES FOR YOUTH, <http://www.advocatesforyouth.org/publications/publications-a-z/409-the-truth-about-abstinence-only-programs> (last visited Mar. 7, 2017).

331. *See supra* Section III.B.

332. Andria Simmons, *Survey Suggests Meth Ads Effective*, *AJC*, June 13, 2011, at B1.

333. *Id.*

334. S. Res. 389, 113th Cong. (2014) (enacted).

335. OFFICE OF NAT’L DRUG CONTROL POL’Y, EXEC. OFFICE OF THE PRESIDENT, NATIONAL SYNTHETIC DRUGS ACTION PLAN: THE FEDERAL GOVERNMENT RESPONSE TO THE PRODUCTION, TRAFFICKING, AND ABUSE OF SYNTHETIC DRUGS AND DIVERTED PHARMACEUTICAL PRODUCTS 27–30 (2004), https://www.ncjrs.gov/ondcppubs/publications/pdf/national_synth_drugs.pdf.

to designer drugs. While many states have enacted statutes to ban listed substances, their efforts, although quicker, will not solve the national problem. In order to put an end to the harm inflicted from this unregulated market, the United States needs to: 1) amend the Controlled Substances Act to eliminate loopholes and allow more flexible scheduling; 2) reconsider current drug scheduling; 3) legalize natural, studied, less-harmful drugs where testing has already begun on the state level; and 4) educate the community of the dangers associated with both legal and illicit substances. Although there is no perfect solution to eradicate synthetic drugs, this is a step in the right direction to hopefully provide better alternatives and eliminate the information asymmetry many drug users face.