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DECONSTRUCTING SYNTHETIC MARIJUANA PROSECUTIONS
By Jeffrey C. Grass, JD, MS, ACLM*
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“One of the great mistakes is to judge policies and programs by their intentions rather than their results.”

– Milton Friedman

Beginning in 1984, John W. Huffman, a professor of Organic Chemistry at Clemson University and his team of researchers began developing cannabinoid compounds to aid in research of multiple sclerosis, HIV/AIDS, and chemotherapy. The first success, named "JWH-018" (JWH for Huffman's initials), was produced in 1995. Over the course of twenty years, Huffman and his team developed 450 synthetic cannabinoid compounds which were used to test the effect of cannabinoid receptors in the brain and other organs. The most common cannabinoid is tetrahydrocannabinol (THC), which is the primary psychoactive compound of marijuana. Huffman gave them names such as "JWH-398," "AM-2201" and "RCS-4," corresponding to the respective inventor's initials.

In the late 2000s, two of Huffman's cannabinoid compounds began being sold in Germany as marijuana alternatives known as “K2” and “Spice.” Since 2010, there has been a dramatic rise in the use of synthetic marijuana. Many of these products are marketed or sold openly as “incense,” “potpourri,” “air fresheners,” “aromatherapy products,” or “legal” alternatives to controlled substances. They have been sold under many brand names, such as "Mr. Nice Guy," "K2" and "Red Dawn X." The popularity of synthetic marijuana is principally due to a common belief that synthetic cannabis does not produce positive results in drug tests for cannabis. However, it is possible to detect its metabolites in human urine.

Typically, the manufacturer adds the chemical to a benign herb, so it looks like and can be smoked as if it were marijuana. The effects are often reported to be similar to marijuana, although the synthetic chemicals can be far more powerful than all natural herbs and have potentially harmful effects. Their full effects on the brain are still unknown, and Huffman has characterized the chemical as dangerous. Both government and private research scientists believe that these products cause harmful effects ranging from nausea to drug induced psychosis and even death.

In response to these beliefs, the Drug Enforcement Agency (DEA) implemented Project Synergy II, which began January 2014. Project Synergy II was coordinated by DEA’s Special Operations Division (SOD), working with the DEA Office of Diversion Control. As of today, more than 227 arrests have been made, and 416 search warrants served in 35 states, 49 cities and five countries, along with more than $51 million in cash and assets seized. These series of enforcement actions included retailers, wholesalers, and manufacturers. However, the manner in which the anti-synthetic marijuana laws have developed is so problematic and their retroactive enforcement so patently unfair that the criminal defense bar warrants a critical analysis of their application.
DEVELOPMENT OF ANTI-SYNTHETIC MARIJUANA LAWS

Anti-synthetic designer drug laws have been on the books for many years. The Controlled Substances Act (CSA) contains the Analogue Enforcement Act of 1986 (AEA). The AEA criminalizes the illegal use and possession of any substance that is chemically and/or pharmacologically similar to a substance that is listed in Schedule I or Schedule II. In the case of synthetic marijuana, tetrahydrocannabinol (THC) is the substance on Schedule I, to which it is chemically and pharmacologically most similar. However, the AEA stipulates that “[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.” As a result, of this loophole in the law, synthetic drug manufacturers were able to avoid the prohibitions of this statute by marking and selling the substances as “not for human consumption.” In order to successfully prosecute a case under the AEA, the DEA must either obtain a confession or set up an undercover sting operation with an audio and video recording of a retailer or manufacturer stating that a mixture is intended to be smoked, snorted or swallowed.

On March 1, 2011, in an effort to plug the holes in the gap created by the AEA, the DEA administratively placed in Schedule I of the CSA, five synthetic cannabinoids commonly found in “spice” and “K2” products (JWH-018, JWH-073, JWH-200, CP-47,497, and Cannabicyclohexanol). The DEA used its emergency authority under the CSA to ban these substances and their analogues for one year, pending the completion of the DEA and Food and Drug Administration (FDA) studies. The DEA publishes these administrative scheduling actions in the Code of Federal Regulations (CFR) as its “Notice of Intent” to ban a substance. Section 201 of the CSA (21 U.S.C. 811) provides the Attorney General with the authority to place a substance temporarily into Schedule I of the CSA for two years without regard to the requirements of 21 U.S.C. 811(b) if he finds that the such action is necessary to avoid an imminent hazard to the public safety. 21 U.S.C. 811(h). In addition, if proceedings to control a substance are initiated under 21 U.S.C. 811(a) (1), the Attorney General may extend the temporary scheduling up to one year. Substances in Schedule I, are those that have a high potential for abuse, no currently accepted medical use in treatment in the United States (U.S.), and a lack of accepted safety for use under medical supervision. 21 U.S.C.12 (b)(1).

On February 29, 2012, DEA extended the Schedule I status of these substances for six months pending the passage of a final regulatory ruling. Thereafter, on July 9, 2012, the President signed the Synthetic Drug Abuse Prevention Act of 2012 (SDAPA) into law. The SDAPA amended the CSA, by legislatively placing "cannabimimetic agents" and 26 substances in Schedule I. SADPA also redefined “cannabimimetic agents,” to include any substance that is substantially similar to the active ingredients in marijuana containing Tetrahydrocannabinols (THC), a Schedule I substance. These substances are termed “Synthetic cannabinoids” and refer to a family of substances that act on the brain similar to delta-9 THC, the main psychoactive constituent of cannabis.

DEFECTS IN ANTI-SYNTHETIC MARIJUANA LAWS

Substances are considered “scheduled” when they are listed in 21 U.S.C. § 812. Once a substance is scheduled, it is illegal to distribute or possess with intent to distribute under the
CSA, 21 U.S.C. § 841. However, changing just one molecule of a controlled substance analogue moves it out of § 841. Manufacturers of these synthetic drugs moved quickly to exploit these defects in the CSA, SADPA and DEA Rules and Regulations and bypass the prohibitions in the law by altering just one molecule in a substance’s chemical structure. As a result, the substance would lose its legal status as a “controlled substance.” This loophole created a shell game whereby manufacturers would consistently revise the chemical structure of their synthetic chemical analogue until it was subsequently banned as well. These manufacturers would also send a “Does Not Contain” laboratory report with their shipment to distributors and retailers attesting to the fact that the mixture was devoid of any of the banned chemical substances then in Schedule I & II and reassured them that the synthetic mixtures were legal to sell.

Next, the bulk distributors of the packaged mixture seized upon the language in the Federal Analogue Act requiring that a substance be “intended for human consumption,” under 21 U.S.C. § 813 and began marketing their synthetic cannabinoid products as "potpourri," "incense," "air freshener," or "aroma therapy products," which was labeled as "Not for Human Consumption." The utilization of these markings on the packages has up to this point been the primary basis for synthetic cannabinoid manufacturers and distributors defense from prosecution. However, the government has responded by treating these markings on the packages as an attempt to prevent the product from being classified under food/drug definitions for the purpose of avoiding the FDA testing and approval process and other labeling requirements. Under 21 U.S.C. § 352, a drug is considered misbranded unless its labeling bears adequate directions for all its intended uses. In addition, the drug is considered misbranded if any of a drug’s labeling is false or misleading. Likewise, it is a violation of 21 U.S.C. § 331(a) to introduce or deliver a misbranded drug into interstate commerce.

**The Key to Defending Synthetic Marijuana Cases**

The most important question for the practitioner when defending synthetic marijuana cases is whether the defendant was, in fact, in possession of a “controlled substance analogue”. The CSA defines a "controlled substance analogue" under 21 U.S.C. §802(32)(A), according to a three-part test:

(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. 21 U.S.C. §802(32)(A)(2004).37

**Conjunctive Application of the Analogue Statute**
The most critical aspect of the determination of whether a mixture is a "controlled substance analogue" depends on whether this statute is read in the “conjunctive” or “disjunctive.” A conjunctive reading of the “controlled substance analogue” statute is more helpful to the defense because it requires more elements of the statute to be proven by the state and is thus more restrictive and requires the government prove either element (i) or (ii) and element (iii), whereas a disjunctive interpretation requires the government to prove only one element. However, surprisingly, the DEA and the courts in most jurisdictions have construed 21 U.S.C. §802(32)(A) to be read in the conjunctive.38 Some Circuits have not yet ruled on this issue.

(i). Proving Element One - Similar in Chemical Structure.

The controlled substances analogues are not substantially similar in chemical structure as THC because they have different brain receptor connectivity than THC. Consequently, the controlled substance analogues do not satisfy this element (i). Consequently, in order to be considered a “controlled substance analogue for purposes of relevant conduct, the government must prove elements (ii) and (iii).

(ii). Proving Element Two Substantially Similar Effects.

Because controlled substances analogues have different connectivity with brain receptors, there is an open question about whether these substances have substantially similar effects of users. Moreover, it is impossible to know whether such effects are present because there have been no human trials. The only studies that exist are those performed on mice. In fact, for purposes of illustration, XRL11 has been placed on the banned listed by the DEA.39 However, the evidence clearly shows that XRL11 is not structurally similar to THC and cannot be classified as either a “synthetic cannabinoid” or a “cannabimimetic agent.”40 The reason for its exclusion from either group is that it lacks the same affinity for the peripheral CB2 receptor and the central CB1 receptor. Because there are no systematic dosing studies performed in humans, similarities between plant-derived cannabinoids and synthetic cannabinoids are simply assumed. This assumption is based on the supposition that the synthetic cannabinoid’s binding affinities on the cannabinoid receptors CB1 (located in the brain); and, CB2 (located in the peripheral nervous system) are equivalent to THC.41 The government’s use of this method for evaluating one of these synthetic substances is highly speculative and likely falls short of solid proof that an individual is in possession of a controlled synthetic analogue.

A discussion of this principle is set forth the magazine FORENSIC SCIENCE REVIEW, whereby the authors state, “the CB1 receptor is responsible for the psychotropic effects of cannabis, and therefore the ability of a ligand to bind to and act as an agonist at the CB1 receptor may indicate its potential as an alternative to marijuana for recreational use. The role of the CB2 receptors is largely as immune modulators and the target for potential therapeutic agents.”42 Under this theory, synthetic cannabinoids are not equally binding on receptors CB1 and CB2 when compared with THC.43 Therefore, controlled substance analogues do not have the same effects on the human body as THC. And, as the ratio of CB2 to CB1 affinities demonstrates, these analogues have less potential for recreational use than THC (almost ten times less).44 Under the foregoing analysis, XRL11 does not have a substantially similar or greater than the
stimulant, depressant or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.\textsuperscript{45} Therefore, controlled substance analogues do not meet the definition of a “controlled substance analogue” as defined by the statute §802(32)(A)(i)&(ii). Accordingly, the defendants cannot be convicted under the CSA 21 U.S.C. §841.

(iii). Proving Element Three to Intend or Represent.

This element is the scienter requirement of the law. In order to be convicted of a violation of the statute, a defendant must know the material in question is, in fact, a controlled substance analogue as defined under 21 U.S.C.S. § 802(32)(A). That is, the government must prove that the defendants knew that their potpourri (ii) was a controlled substance analogue because it had a substantially similar affect as THC on an individual; and, (iii) the defendant represented or intended it have such an effect.\textsuperscript{46}

By way of further explanation, knowledge of both elements (ii) and (iii) of § 802(32)(A) is required because the defendants could not represent these substances had the effect of a Scheduled I or II, unless they had reason to know or think it did. However, the government cannot meet its burden under element (ii) or (iii) since until it classifies the chemical substance as a “controlled substance analogue.” The “fair warning requirement” implicit in the Due Process Clause\textsuperscript{47} demands that criminal statutes provide “fair warning . . . in a language that the common world will understand, of what the law intends to do if a certain line is passed.”\textsuperscript{48} Once a court decides to interpret a statute so as to render the defendant’s conduct criminal, it may not apply that interpretation retroactively unless “the statute, either standing alone or as construed, made it reasonably clear at the relevant time that the defendant’s conduct was criminal.”\textsuperscript{49} This warning is accomplished by the DEA through its “Notice of Intent” to ban the substance. These public notices evidence the first opportunity for a criminal defendant to be made aware that the synthetic cannabinoids he or she is selling or possessing is a prohibited controlled substance under 21 U.S.C. §841. Even the “Notices of Intent” themselves bar prosecution until the expiration of 30 days - presumably to give sufficient notice to individuals selling the material to stop.\textsuperscript{50} Nevertheless, we have seen criminal defendants being prosecuted selling controlled substance analogues for periods of time prior to notification that their conduct was criminal and irrespective of the unfairness of the retroactive laws.

Under the prevailing law, an individual cannot be regarded as having formed the culpable mental, \textit{mens rea}, and be subject to criminal penalties, until they are given proper notice that the substance they possess is illegal. Nor, should their punishment be enhanced on the basis of conduct that was not criminal at the time it was committed. Consequently, the “controlled substance analogue statutes” intrudes upon the due process rights of any individual who is charged with the possession of a controlled substance on any date prior to the “Notice of Intent” to ban it. If a defendant is imbued with constructive knowledge of the illegality of the act, they can also be imbued with a lack of it. In other words, the decision by the government not to Schedule a particular substance prior to the time it is possessed, should negate the criminality of the act. In short, the public should not be charged with a knowing violation of the CSA, when these substances had not yet been declared as illegal under 21 U.S.C. §802(32)(A).
The retroactive nature of these prosecutions and excessive terms of incarceration beg the question of what purpose these laws serve. Punishment under retroactive laws cannot possibly accomplish the deterrence. Deterrence requires the amount of punishment be limited to achieve the desired amount of deterrence. Most versions of retributive justice argue that the amount of punishment should be proportional to the amount of harm caused. Reform theory argues that the amount of punishment should be enough to cause reform in the offender.\textsuperscript{51} No matter what theory of punishment one applies, the current synthetic controlled substances laws fall short of achieving any legitimate purpose.

**APPLYING THE FEDERAL SENTENCING GUIDELINES**

Recently, the government has announced that each of the synthetic cannabinoids that appear as a Schedule I controlled substance will no longer be treated on a 1:1 ratio with marijuana under the USSG \textsuperscript{2D2.2} Drug Equivalency Table. Instead, the DEA has stated that, “the U.S. Sentencing Commission and ODE have taken the position that regardless of its form, synthetic cannabinoids will always be subject to the 1:167 ratio to marijuana for sentencing.” This ratio is the same as pure THC and significantly increases the potential periods of incarceration. However, the Court is under no duty to accept such arbitrary ratios. Arguably, the 1:167 ratio robs the sentencing court of its discretion to determine a fair and appropriate sentence based upon the facts and circumstances of the case.\textsuperscript{52} Congress, through the U.S. Sentencing Commission, has given to the sentencing judge the exclusive authority to determine which particular analogue substances are to be included as a part of the drug quantity for purposes of establishing the relevant conduct in a sentence.\textsuperscript{53} Even the high Court has allowed sentencing Judges leeway to follow their policy preferences when they disagree with the Sentencing Commission. *Rita v. United States*, 127 S. Ct. 2456, 2475 (2007) (Scalia, J., concurring in part and concurring in the judgment); *Kimbrough v. United*, 2456, 2475 (2007) (Scalia, J., concurring in part and concurring in the judgment).

This policy also ignores the stark difference in potency levels of pure THC with the relative potency of the controlled substance analogue. This differential is a required consideration by the court. See USSG \textsuperscript{2D1.1} comment (n.6). In fact, a very potent marijuana plant will only possess approximately 10 percent THC.\textsuperscript{54} Furthermore, this policy ignores the US Sentencing Guidelines distinction between pure THC (Organic) and pure THC (Synthetic), which can both be possessed in their pure form. The USSG distinguishes between pure THC, marijuana (buds) and marijuana plants. Since the synthetic marijuana plant mixtures at issue are most similar to actual marijuana (buds) are smoked and have similar effects on human body, these cases should be treated the same as a marijuana case with a 1:1 ratio.

**USSG \textsuperscript{2D1.1} PRECLUDES THE 1:167 RATIO**

The use of the new 1:167 results in absurd drug quantities. For example, a defendant who is arrested with one once of potpourri or spice will be sentenced as though her were in possession of 167 ounces of marijuana. The 1:167 ratio the government sought to utilize was more suited to large companies and manufactured who possess the chemical analogue in its undiluted and concentrated form. Moreover, the manufacturers of these controlled substance analogues usually do not produce more than 7000 per year at a cost of $735,000.00. The U.S.
Sentencing Guidelines specifically preclude this type of government overreaching when approximating relevant conduct to such an extreme degree. USSG §2D1.1 Application Note 12 states in pertinent part that, “[w]here there is no drug seizure or the amount seized does not reflect the scale of the offense, the court shall approximate the quantity of the controlled substance.” “If, however, the defendant establishes that the defendant did not intend to provide or purchase, or was not reasonably capable of providing or purchasing … the court shall exclude from the offense level determination the amount of a controlled substance that the defendant proves that the defendant did not intend to provide or purchase or was not reasonably capable of providing or purchasing,” Id\textsuperscript{55}. (emphasis added). Therefore, in applying this 1:167 ratio the government is requesting that defendant’s relevant conduct for purposes of sentencing that is not permitted under the sentencing guidelines.

**THE 1:167 RATIO IS CONTRARY TO DOJ POLICY**

Despite the zeal to imprison the defendants for as long as possible, the Court should consider first recent policy statements made by the US Attorney General. Attorney General Eric Holder has announced that his office has asked the U.S. Sentencing Commission reduce prison sentences for low-level drug offenses. The purpose of the proposal is to address the outsized prison population in the United States.\textsuperscript{56} The Attorney General’s required reduction is intended to avoid incarcerating for interminable periods of time minor street peddlers of synthetic marijuana such as the Stuarts. In the light of this stated goal, the government’s proposed drug equivalency ratio of 1:167 under USSG 2D1.1, is contrary to current DOJ policy.\textsuperscript{57}

**THE IMPORTANCE OF THE INDICTMENT**

The indictments under which your client is charged should be scrutinized because they stretch to correct deficiencies in the law and may give you a basis severely to limit the relevant conduct in an alleged criminal conspiracy. Typically these case are filed by the Federal Government. The typical federal indictment is brought under the Federal Control Substance Act (CSA), 21 U.S.C. § 846, and names a particular chemical analog material as well as the chemical formula, but then adds the aggravating factor that attempts to increase the drug quantity by including in the indictment language the incorporates the entire drug quantity the mixture, usually some kind of leafy substance termed “potpourri,” since 2010. For example, in a recent case in the Northern District of Texas, the government charged the defendants with engaging in an ongoing criminal conspiracy to distribute the “Controlled Substance Analog,” XLR11, which is a chemical analog of THC present in the Marijuana plant. It was further alleged that the defendants “acted with the intent to manufacture and distribute ‘mixtures’ of substances containing detectable amounts of synthetic cannabinoids, which is a Schedule I controlled substance analogue as defined in 21 U.S.C. § 802(32), knowing that the substance was intended for human consumption as provided in 21 U.S.C. § 813, a violation of 21 U.S.C. § 841(a)(1).\textsuperscript{58} All in violation of 21 U.S.C. § 846.” This section of the law also states that the defendants do not have to know which particular analog substance is contained in the “mixture,” just that it had some analogue.

In this case, the government name the precise analogue XRL11 as the Schedule I controlled substance possessed by the defendants. The government then sought to include in the
relevant conduct, the entire leafy mixture on which the XRL11 was laced. To calculate the drug quantity otherwise, would work an absurd result whereby the actual drug, if weighed, would be similar to the weight of heroin, cocaine or methamphetamine resulting in very low sentences under both state and federal law.

**APPROXIMATING DRUG QUANTITIES**

The USSG permits the Court to approximate drug quantities for the purpose of determining relevant conduct in sentencing. While approximation is a common and permissible way to determine drug quantity, the law requires that it be based on reliable estimates. *U.S. v. Marquez*, 699 F.3d 556, (1st Cir. 2012); *U.S. v. Betancourt*, 422 F.3d 240, 246-47 (5th Cir. 2005). The determination of the reliability of an approximated drug quantity depends on whether the record discloses evidence sufficient for a court to make a reasonable approximation of quantity. *U.S. v. Marrero-Ortiz*, 160 F.3d 768, 780 (1st Cir. 1998) (“[Without] particularized findings to support the assigned [base offense level], we have no principled choice but to vacate the sentence and remand for further findings and resentencing.”); *U.S. v. Carreon*, 11 F.3d 1225, 1231 (5th Cir. 1994) (remanding for findings where appellate court is “left to second-guess the basis for the district court’s calculation”). The government’s contention of what the drug quantity is will be deemed final unless the defendant specifically offers some other calculation based upon independent evidence. Some methods of approximating drug quantities include invoices, shipping labels, and bank records, the statements of co-conspirators and statements of the defendant. Whatever the purported basis for approximating drug quantities by the government you would be well served by requesting proof early on and scrutinize the evidence. Unfortunately, it happens too often that, unless challenged. The government will exaggerate the relevant conduct based upon corroborated evidence.

**CHALLENGING DEA LAB REPORTS**

In our case, the defendants were in possession of a synthetic potpourri mixture laced with XRL11, which was detected after it had been diluted with acetone and sprayed in differing quantities and with varying degrees of concentration onto the potpourri. Because the DEA lab cannot state with any accuracy or consistency the amount of XLR11 detected on our mixture determining its equivalence with pure THC is a mere guess. In fact, the DEA lab reports only disclose the presence of trace elements of the analogue XRL11. Absent the ability to consistently measure the uniform presence, type and purity of the analogue – this method of determining drug quantity is per se arbitrary and results in absurd and inconsistent drug quantity.

Complying with lab testing protocols and documentation is equally important. Counsel would be well served by examining the control sample used, the values of the retention time. Maintenance of all equipment used should follow the preventative maintenance programs (weekly, monthly, 3 monthly, 6 monthly and yearly). The equipment calibration schedule should be followed. The MS must be tuned before each use. If advance notice of GC testing is available, an adverse party should observe the procedure. If a retained consultant or the knowledgeable attorney observes the technician's use of the GC instrument, important information can be recorded. The technician's preparation of the specimen and the subsequent
injection can be observed for errors or malfunctioning equipment. The observer should record the instrument's make, model, serial number, injection temperature, column temperature, carrier gas flow rates and pressure, identify the type of detector used, and observe any manipulation of the data by use of a computer. Ensure that the technician properly starts measuring the time at injection and records the time of elution. Any discrepancy in the time will produce an erroneous retention time. If the procedure cannot be observed, the adverse party should seek all pertinent information (experimental conditions, measurements, instrument identification) and hard copy output.

CONCLUSION

There is no question that synthetic marijuana is harmful to those who smoke it and that steps need to be taken to eradicate this blight. However, the laws criminalizing the possession, sale and distribution of these substances are too draconian and run contrary to fundamental principles of fairness and justice. An important component of governmental discretion when deciding whether to prosecute and vehemently one should pursue long prisons sentences have been abandoned in favor of a policy of incarcerating street peddlers of synthetic marijuana to decades of incarceration. The unfairness of this brand of government excess is made even more glaring when considering these same defendants had no idea that the fake pot they had been selling the week before was, to their understanding, legal. Many would say that they that had they just been told to stop selling these substances; they would have. However, not given that chance, the only course of action is to teach and tell others of how best to defend a synthetic marijuana case.

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ENDNOTES

3 Brownstein, Joseph (March 17, 2010), K2 Giving People Another Dangerous Way to Get High, ABC News.
4 Id.
6 Id.
7 According to forensic laboratory reports, the first appearance of synthetic cannabinoids in the U.S. occurred in November 2008, when U.S. Customs and Border Protection analyzed "Spice” products. From January 1 through December 31, 2012, the American Association of Poison Control Centers (AAPCC) has reported receiving in excess of 5,200 calls relating to products purportedly laced with synthetic cannabinoids. Although the center does not identify specific cannabinoid substances, the data does
indicate the magnitude of exposure to synthetic cannabinoids. 21 CFR 1308.11.


8 "I figured once it got started in Germany it was going to spread. I'm concerned that it could hurt people," Huffman said. "I think this was something that was more or less inevitable. It bothers me that people are as stupid as to use this stuff". Huffman may have developed these compounds for scientific research, but now he gets blamed for its abuse. As JWH-018 is more potent and easy to make, Huffman believes it is a more widely used synthetic cannabinoid of the JWH series. Wang, Linda (June 28, 2010). "CNN Talks With John W. Huffman". Chemical & Engineering News 88 (26): 43. Retrieved October 8, 2011. http://www.klobuchar.senate.gov/public/2014/4/the-rise-of-fake-pot.

9 http://drug.addictionblog.org/does-synthetic-weed-show-up-on-drug-tests/


11 Id.

12 Id.


14 The Drug Enforcement Administration (DEA), Customs and Border Protection (CBP), Immigration and Customs Enforcement Homeland Security Investigations (HSI), Federal Bureau of Investigation (FBI), Internal Revenue Service (IRS) and other federal, state, and local partners announced the culmination of Project Synergy Phase II, an ongoing effort targeting every level of the dangerous global synthetic designer drug market. Since January and leading up to early this morning, nationwide enforcement operations have taken place targeting these drug trafficking organizations that have operated in communities across the country. http://www.justice.gov/dea/divisions/hq/2014/hq050714.shtml

15 The unit of the DEA that distributes the information is called the Special Operations Division, or SOD. Two dozen partner agencies comprise the unit, including the FBI, CIA, NSA, Internal Revenue Service and the Department of Homeland Security. It was created in 1994 to combat Latin American drug cartels and has grown from several dozen employees to several hundred. Today, much of the SOD's work is classified, and officials asked that its precise location in Virginia not be revealed. http://www.huffingtonpost.com/2013/08/05/dea-surveillance-cover-up_n_3706207.html.

16 “Shutting down businesses that traffic in these drugs and attacking their operations worldwide is a priority for DEA and our law enforcement partners,” said DEA Administrator Michele M. Leonhart. “These designer drugs are destructive, dangerous, and are destroying lives. DEA has been at the forefront of the battle against this trend and is targeting these new and emerging drugs with every scientific, legislative, and investigative tool at our disposal.” These series of enforcement actions included retailers, wholesalers, and manufacturers. http://www.justice.gov/dea/divisions/hq/2013/hq062613.shtml.

17 Id.

18 Id.


20 A “controlled substance analogue” as a substance which: (1) has a chemical structural substantially similar to that of a controlled substance in Schedules I or II; (2) has a stimulant, depressant or hallucinogenic effect on the central nervous system that is substantially similar to or greater than that of a controlled substance in Schedules I or II; or (3) a particular person represents or intends to have a stimulant, depressant, or hallucinogenic effect substantially similar to or greater than that of a controlled substance in Schedules I or II [21 U.S.C. § 802(32)].

21 Id.

22 Id.


24 21 U.S.C. § 813 provides a “catch all” regarding controlled substance analogues. According to § 813, a “controlled substance analogue” (even one not specifically listed on the banned list) will be treated, for
purposes of Federal law, as a controlled substance in schedule I, if the substance is intended for human consumption as required under 21 U.S.C. § 813.

25 Synthetic cannabinoids refer to a family of substances that act on the brain similar to delta-9 THC, the main psychoactive constituent of cannabis. Synthetic cannabinoids mimic the hallucinogenic effects of marijuana, and are considered “drugs” under 21 U.S.C. § 321(g)(1) because they are intended to affect the structure or a function of the body of a man.

26 The DEA administers, implements, and enforces Titles II and III of the Comprehensive Drug Abuse Prevention and Control Act of 1970, often referred to as the Controlled Substances Act and the Controlled Substances Import and Export Act (21 U.S.C. 801-971), as amended (hereinafter, "CSA"). The implementing regulations for these statutes are found in Title 21 of the Code of Federal Regulations (CFR), parts 1300 to 1321. Under the CSA, controlled substances are classified in one of five schedules based upon their potential for abuse, their currently accepted medical use, the lack of accepted safety for use under medical supervision, and the degree of dependence the substance may cause. 21 U.S.C. 812. The list of legislatively scheduled controlled substances is found at 21 U.S.C. 812(c) and the current list of scheduled substances is published at 21 CFR part 1308. These initial schedules may be modified either by legislation or by rulemaking.


28 Section 201(h) of the CSA (21 U.S.C. 811(h)) provides for an expedited temporary scheduling action where such action is necessary to avoid an imminent hazard to the public safety. As provided in this subsection, the Attorney General may, by order, schedule a substance in schedule I on a temporary basis. Such an order may not be issued before the expiration of 30 days from (1) the publication of a notice in the Federal Register of the intention to issue such order and the grounds upon which such order is to be issued, and (2) the date that notice of a proposed temporary scheduling order is transmitted to the Secretary of HHS. 21 U.S.C. 811 (h)(1).

29 Regular scheduling actions in accordance with 21 U.S.C. 811(a) are subject to formal rulemaking procedures done "on the record after opportunity for a hearing" conducted pursuant to the provisions of 5 U.S.C. 556 and 557. The CSA sets forth specific criteria for scheduling a drug or other substance. While temporary scheduling orders are not subject to judicial review (21 U.S.C. 811(h) (6)), the regular scheduling process of formal rulemaking affords interested parties with appropriate process and the government with any additional relevant information needed to make a determination. Final decisions which conclude the regular scheduling process of formal rulemaking are subject to judicial review. 21 U.S.C. 877.

30 Where the necessary findings are made, a substance may be temporarily scheduled if it is not listed in any other schedule under section 202 of the CSA (21 U.S.C. 812) or if there is no exemption or approval in effect under section 505 of the Federal Food, Drug, and Cosmetic Act (FD&C Act) (21 U.S.C. 355) for the substance. The Attorney General has delegated his authority under 21 U.S.C. 811 to the Administrator of DEA, who in turn has delegated her authority to the Deputy Administrator of DEA. 28 CFR 0.100, Appendix to Subpart R. Section 201(h) (4) of the CSA (21 U.S.C. 811(h) (4)) requires the Deputy Administrator to notify the Secretary of the Department of Health and Human Services (HHS) of his intention to temporarily place a substance into Schedule I of the CSA.

31 Available data and information for UR-144, XLR11, and AKB4a indicate that these three synthetic cannabinoids have a high potential for abuse, no currently accepted medical use in treatment in the U.S., and a lack of accepted safety for use under medical supervision.

32 SDAPA of 2012, Public Law 112-144, Title XI, Subtitle D. Cannabimimetic Agents are placed in Schedule I unless specifically exempted or unless listed in another schedule, any material, compound, mixture, or preparation which contains any quantity of cannabimimetic agents, or which contains their salts, isomers, and salts of isomers whenever the existence of such salts, isomers, and salts of isomers is

33 The list of legislatively scheduled controlled substances is found in 21 U.S.C. §812(c), and the current list of scheduled substances is published in 21 C.F.R. § 1308. These initial schedules may be modified either by legislation or by rulemaking.

34 SADPA defines “cannabimimetic agents” as any material, compound, mixture, or preparation which contains any quantity of a substance, or which contains their salts, isomers, and salts of isomers whenever the existence of such salts, isomers, and salts of isomers is possible within the specific chemical designation that acts a cannabinoid receptor type 1 (CB1 receptor) and is substantially similar to the active ingredients in marijuana containing Tetrahydrocannabinols (THC), a Schedule I substance, and produces a similar effect when smoked or ingested, will itself automatically be listed as a Controlled Substance under Schedule I.

35 21 C.F.R. Part 1308, Volume 78, Number 71, Pages 28735-28739 (Friday, April 12, 2013).


38 In fact, the Fifth Circuit has not yet expressly weighed in on which method of interpretation that should be employed and has not expressly adopted a disjunctive reading of the statute. United States v. Reece, 2013 U.S. Dist. LEXIS 103846 (W.D. La. May 10, 2013). However, elsewhere in the Fifth Circuit sentencing judges have concluded that a conjunctive reading of the statute is required, based in part, on the Fifth Circuit’s decision in Granberry. See United States v. Reece, 2013 at 103846 (reading Granberry as adopting a conjunctive interpretation). Moreover, Granberry actually quoted the statutory definition in its entirety and also paraphrased the definition in a way that is consistent with a conjunctive interpretation.” Id. Therefore, based upon the presumptive conjunctive interpretation of 21 U.S.C. §802(32)(A) by the Fifth Circuit and a majority of other Circuit Courts, combined with the DEA’s own reading of the statute as conjunctive as acknowledged by the government, this Court should also rely upon a conjunctive interpretation of the CSA’s definition of a “controlled substance analogue.”

39 This action was taken on April 12, 2013 when the DEA banned the most common synthetic cannabinoids UR-144, XLR11 and AKB48. The Deputy Administrator of the Drug Enforcement Administration (DEA) is issuing this notice of intent to temporarily schedule three synthetic cannabinoids into the Controlled Substances Act (CSA) pursuant to the temporary scheduling provisions of 21 U.S.C. 811(h). The substances are 1-pentyl-lH-indol-3-yl) (2,2,3,3-tetramethylcyclopropyl) methanone (UR-144), 1-(5-fluoro-pentyl) -lH- indol-3-yl] (2,2,3,3-tetramethylcyclopropyl) methanone (5-fluoro-UR-144; XLR11) and N-(1-adamantly)-1-pentyl-lH-indazole-3-carboxamide(APINACA, AKB48). This action is based on a finding by the Deputy Administrator that the placement of these synthetic cannabinoids into Schedule I of the CSA is necessary to avoid an imminent hazard to the public safety. Any final order will be published in the Federal Register and may not be issued prior to May 13, 2013. Any final order will impose the administrative, civil, and criminal sanctions and regulatory controls of Schedule I substances under the CSA on the manufacture, distribution, possession, importation, and exportation of these synthetic cannabinoids. CFR Volume 78, Number 71 (Friday, April 12, 2013)] [Proposed Rules][Pages 21858-21861].

40 A cannabimimetic agent is any substance that is primarily a cannabinoid receptor type 1 (CB1 Receptor) agonist included in the following structural classes:
(i) hydroxycyclohexyl-phenol;
(ii) naphthoyl-indole;
(iii) naphthoyl-pyrrole;
(iv) naphthylmethylene-indene;
(v) phenylacetyl-indole or benzoyl-indole; and,
(vi) classical cannabinoids (dibenzopyrans).


43 The binding affinities of XLR 11 and THC on receptors CB1 and CB2 are:

\[
\begin{align*}
\text{THC} & \quad (\text{Ki}) = 41\text{nM} & \quad \text{CB2 (Ki)} = 36\text{nM} & \quad \text{CB2 Ki/CB1 Ki ratio} = 0.88 \\
\text{XLR11} & \quad (\text{Ki}) = 24\text{nM} & \quad \text{CB2 (Ki)} = 2.1\text{nM} & \quad \text{CB2 Ki/CB1 Ki ratio} = 0.09
\end{align*}
\]

Compounds with a lower Ki bind more tightly to the receptor. The CB2 Ki/CB1 Ki ratio is an indicator of the potential for recreational use; a high ratio indicates preference for the CB1 receptor.

44 Gurney SMR, Scott KS, Kacinko SL, Presley BC, Logan BK: Pharmacology, toxicology, and adverse effects of synthetic cannabinoid drugs; FORENSIC SCI REV 26:53; 2014


See United States v. Turcotte, 405 F.3d at 527; see also United States v. Sullivan, 714 F.3d 1104 (8th Cir. 2013) (listing whether the defendant "knew he was in possession of a controlled substance analogue" as an element of the offense).

47 Lanier, 520 U.S. at 265 (quoting McBoyle v. United States, 283 U.S. 25, 27 (1931)).

50 For example, in the recent case we were discussing, the DEA “Notice of Intent” to schedule three of the most common controlled substance analogues known as UR-144, XLR-11, and AKB-48 pursuant to the temporary scheduling provisions of the Controlled Substances Act. 21 U.S.C. § 811(h). The Notice of Intent states that, “[a]ny final order will be published in the Federal Register and may not be issued prior to May 13, 2013. Any final order will impose the administrative, civil, and criminal sanctions and regulatory controls of Schedule I substances under the CSA on the manufacture, distribution, possession, importation, and exportation of these synthetic cannabinoids.” (UR-144, XLR-11, AKB-48). On May 16, 2013 the DEA issued a final order to temporarily scheduling these substances. Temporary scheduling lasts for two years, although the time period can be extended for an additional year if the Attorney General decides to pursue permanent scheduling. § 811(h)(2). The record in the public hearing demonstrates, the overwhelming weight of opinion in the scientific community is that the chemical structures of XRL11 and similar synthetic substances are not substantially similar to the chemical structure of THC.


See §2D1.1. Application Note: 12. Types and quantities of drugs not specified in the count of conviction may be considered in determining the offense level. See §1B1.3(a)(2) (Relevant Conduct). Where there is no drug seizure or the amount seized does not reflect the scale of the offense, the court shall approximate the quantity of the controlled substance.

54 http://www.drugs.com/illicit/marijuana.html

The DOJ’s proposal calls for reduced federal drug sentences for defendants with criminal history categories I and II who did not receive:

1. a mandatory minimum sentence for a firearms offense pursuant to 18 U.S.C. § 924(c);
2. an enhancement for possession of a dangerous weapon pursuant to §2D1.1(b)(1);
3. an enhancement for using, threatening, or directing the use of violence pursuant to §2D1.1(b)(2);
4. an enhancement for engaging in an aggravating role in the offense pursuant to §3B1.1; or
5. an enhancement for obstruction or attempted obstruction of justice pursuant to §3C1.1.
6. an enhancement for possession of a dangerous weapon pursuant to §2D1.1(b)(1);
7. an enhancement for using, threatening, or directing the use of violence pursuant to §2D1.1(b)(2); or
8. an enhancement for engaging in an aggravating role in the offense pursuant to §3B1.1; or
9. an enhancement for obstruction or attempted obstruction of justice pursuant to §3C1.1.

IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT ...
60 Id.
61 Id.