Synthetic Drug Trafficking & Abuse Trends

July 13-14, 2013
Pharmacy Diversion Awareness Conference (PDAC)
Portland, OR.

Alan G. Santos, Associate Deputy Assistant Administrator,
Operations Division, Office of Diversion Control,
U.S. Drug Enforcement Administration
Outline

• Synthetic Cannabinoids
• Synthetic Cathinones
• Other Synthetic Compounds
• Scope of the Problem
• Control Efforts: Federal, State, & International
Targeting emerging psychoactive designer synthetic drugs [i.e. synthetic cannabinoids (the synthetic marijuana compounds), synthetic cathinones (the synthetic stimulants), and other emerging synthetic compounds] is a priority for DEA.

But it’s a tough public health & safety challenge!
UNODC: NPS are substances of abuse that are not under international control (but constitute a significant public health threat)
Designer Drugs

These drugs are perceived as being ‘legal’ alternatives to marijuana, cocaine, methamphetamine, and MDMA.
Proliferation of Designer Drugs

- Increasingly popular among recreational drug users
- Internet sales
- Head shops/Smoke shops
- Promoted by discussion boards – self-studies

Armed with medical research and fueled by Chinese factories and YouTube, a band of outlaws has created a dangerous multibillion-dollar industry
Designer Drugs: Where did they come from?

A highly regarded Medicinal Chemist Dr. F. Ivy Carroll and colleagues stated in a recent publication:

Throughout the drug discovery process, pharmaceutical companies, academic institutions, research institutions, and other organizations publish their studies in scientific journals, books, and patents. This information exchange, which is essential to the legitimate scientific enterprise, can be, and is, used by clandestine chemists who duplicate the technical sophistication used by the research community to manufacture and market a seemingly endless variety of analogs of so-called designer drugs.
Designer Drugs: Novel Psychoactive Substances

- Clandestinely produced to mimic the effects of a controlled substance (a substance with an abuse potential)
- Scientific literature excavated to identify substances
- No industrial or medical use for these substances
  - Substances rejected due to poor therapeutic potential
  - Characterization as being “research chemicals,” the only research being undertaken is to their abuse liability and toxicity
- Challenge
  - Change public misperception as to legality and hazards
  - Minimize appeal, a result of devious and aggressive marketing
Synthetic Cannabinoids
Synthetic Cannabinoids:

• A “cannabinoid” is a class of chemical compounds in the marijuana plant that are structurally related.

• “Synthetic cannabinoids” are a large family of chemically unrelated structures functionally (biologically) similar to THC, the active principle of marijuana.

• They may have less, equivalent or more pharmacologic (psychoactive) activity than THC.
Synthetic Cannabinoids

• Synthetic Cannabinoids are sold in retail stores, on the internet, and in “head shops” as “Herbal Incense” or “Potpourri”

• Smoked alone or as a component of herbal products

• Abusers report a potent cannabis-like effect
Adverse Health Effects

Multiple deaths have been connected to the abuse of these substances alone and with other substances on-board.

<table>
<thead>
<tr>
<th>Category</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological</td>
<td>Anxiety, aggressive behavior, agitation, confusion, dysphoria, paranoia, agitation, irritation, panic attacks, intense hallucinations</td>
</tr>
<tr>
<td>Neurological</td>
<td>Seizures, loss of consciousness</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Tachycardia, hypertension, chest pain, cardiac ischemia</td>
</tr>
<tr>
<td>Metabolic</td>
<td>Hypokalemia, hyperglycemia</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>Nausea, vomiting</td>
</tr>
<tr>
<td>Autonomic</td>
<td>Fever, mydriasis</td>
</tr>
<tr>
<td>Other</td>
<td>Conjunctivitis</td>
</tr>
</tbody>
</table>
Synthetic Cannabinoids

• Unregulated and unlicensed industry (many manufacturers)
• Full disclosure of ingredients typically not present
• Batch to batch variance (i.e., “Hot Spots”)
Synthetic Cannabinoids

- A-796,260
- AB-001
- AKB48
- AKB48 N-(5-FLUOROPENTYL)
- AM-1220
- AM-1241
- AM-1248
- AM-2201
- AM-2201 N-(4-FLUOROPENTYL)
- AM-2233
- AM-679
- AM-694
- CB-13
- CP 47,497
- CP 47,497-C8-HOMOLOG
- CP 47,497-C9-HOMOLOG
- EAM-2201
- HU-210
- HU-308
- JWH-015
- JWH-018
- JWH-018 ADAMANTYL CARBOXAMIDE
- JWH-019
- JWH-022
- JWH-073
- JWH-081
- JWH-122
- JWH-122 N-(4-PENTENYL) ANALOG
- JWH-200
- JWH-201
- JWH-203
- JWH-210
- JWH-250
- JWH-251
- JWH-267
- JWH-302
- MAM-2201
- RCS-4
- RCS-4, C4 HOMOLOG
- RCS-8
- STS-135
- UR-144
- UR-144 N-(5-CHLOROPENTYL) ANALOG
- URB597
- URB602
- URB754
- XLR-11
Synthetic Cannabinoids, by State, 2011

Source: NFLIS
Synthetic Cannabinoids, by State, 2012

DEA Office of Diversion Control

Source: NFLIS
# NFLIS Top 10 Drugs

**January – June 2012**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Number of Reports/Exhibits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cannabis/THC</td>
<td>250,959 (33.4%)</td>
</tr>
<tr>
<td>2. Cocaine</td>
<td>130,117 (17.33%)</td>
</tr>
<tr>
<td>3. Methamphetamine</td>
<td>83,349 (11.10%)</td>
</tr>
<tr>
<td>4. Heroin</td>
<td>59,510 (7.92%)</td>
</tr>
<tr>
<td>5. Oxycodone</td>
<td>26,263 (3.50%)</td>
</tr>
<tr>
<td>6. Hydrocodone</td>
<td>19,648 (2.62%)</td>
</tr>
<tr>
<td>7. Alprazolam</td>
<td>18,339 (2.44%)</td>
</tr>
<tr>
<td>8. AM-2201</td>
<td>10,555 (1.40%)</td>
</tr>
<tr>
<td>9. Buprenorphine</td>
<td>5,349 (0.71%)</td>
</tr>
<tr>
<td>10. Clonazepam</td>
<td>5,252 (0.70%)</td>
</tr>
</tbody>
</table>
Synthetic Cathinones
Synthetic Cathinones

• Structurally and pharmacologically similar to amphetamine, Ecstasy (MDMA), cathinone, and other related substances.

• Are central nervous system (CNS) stimulants and have stimulant and psychoactive properties similar to schedule I and II amphetamine type stimulants.

• Synthetic cathinones are sold in retail stores, on the internet, and in “head shops” as “bath salts”, “plant food”, or “jewelry cleaner”
### Adverse Health Effects

Synthetic cathinone users commonly report cardiac, psychiatric, and neurological signs and symptoms with death.

<table>
<thead>
<tr>
<th>System</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>palpitations, tachycardia, chest pain, vasoconstriction, myocardial infarction</td>
</tr>
<tr>
<td>Psychological</td>
<td>Aggressive behavior, anger, anxiety, agitation, auditory and visual hallucinations, depression, dysphoria, empathy, euphoria, fatigue, formication, increased energy, concentration, panic attacks, paranoia, perceptual disorders, restlessness, self-mutilation, suicidal ideation</td>
</tr>
<tr>
<td>Neurological</td>
<td>Seizures, tremor, dizziness, memory loss, cerebral edema, headache, lightheadedness</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>Arthralgia, extremity changes (coldness, discoloration, numbness, tingling), muscular tension, cramping</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>Abdominal pain, anorexia, nausea, vomiting</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>Shortness of breath</td>
</tr>
<tr>
<td>Ear Nose Throat</td>
<td>Dry mouth, nasal pain, tinnitus</td>
</tr>
</tbody>
</table>
Synthetic Cathinones

- Like the cannabinoids, unregulated and unlicensed industry (many manufacturers)
- Full disclosure of ingredients typically not present
- Significant batch to batch variances (i.e., “Hot Spots”)
Synthetic Cathinones

- 3,4-DMMC
- 3-MEC
- 4-FLUOROISOCATHINONE
- 4-MEC
- 4-MePPP
- 4-METHYLBUHEDRONE
- alpha-PBP
- alpha-PVP
- BUPHEDRONE
- BUTYLONE
- DIBUTYLONE
- DIMETHYLONE
- ETHYLCATHINONE
- ETHYLONE
- FLUOROMETHCATINONE
- ISOPENTEDRONE
- MABP
- MDPBP
- MDPPP
- MDPV
- MEPHEDRONE
- METHEDRONE
- METHYLONE
- MOPPP
- MPHP
- NAPYRONE
- N-ETHYLBUHEDRONE
- PENTEDRONE
- PENTYLONE
Synthetic Cathinones, by State, 2010

Reports per State
- 50 or More
- 20-49
- 10-19
- 1-9
- 0
- No Data

Source: NFLIS
Synthetic Cathinones, by State, 2011
Other Synthetic Compounds
25I-NBOMe and 25C-NBOMe

- Hallucinogens, abused orally
- Encountered on blotter paper and in dropper bottles
- Possibly mistaken for LSD
- Linked to recent deaths
- “N-BOMB”, “Smiles”
Phenethylamines

- Are a class of substances with documented psychoactive and stimulant effects / Includes the ‘2C series’ compounds / Abused orally and encountered on “blotter paper” and in “dropper bottles” / Possibly mistaken for LSD / Linked to deaths
Piperizines

- Have hallucinogenic properties as well as often being referred to as amphetamine-like / Tableted and frequently sold as ‘ecstasy’ (BZP-TFMPP combination abused to mimic the effects)
Methoxamine (MXE)

- Dissociative (mind altering effects) and depression of pain
- Effects similar to PCP
- Encountered on designer drug market
  - International increase in ketamine abuse
- Deaths attributed to the substance
Problems with All Synthetic / Designer Drugs

- Marketed to teens and young adults
- Easily attainable in retail environments and via the internet
- Unknown ingredient(s)
- No consistency in manufacturing process
- Not tested for human consumption / Unknown short & long term effects!!
- No known dosage – not FDA approved
- Synergistic effects likely when mixed with other drugs or alcohol
Scope of the Problem
Of the nations surveyed, 87% (70 out of 80) indicate that NPS are available in their respective drug markets.

Source: UNODC questionnaire on NPS, 2012
National Forensic Laboratory Information System (NFLIS) Participating Laboratories

DEA Office of Diversion Control
### Synthetic Cannabinoid & Cathinone Reporting to NFLIS

<table>
<thead>
<tr>
<th>Year</th>
<th>Class</th>
<th>NFLIS Reports</th>
<th>Number of substances from structural class</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>Synthetic cannabinoids</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Synthetic cathinones</td>
<td>26</td>
<td>4</td>
</tr>
<tr>
<td>2010</td>
<td>Synthetic cannabinoids</td>
<td>3,285</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Synthetic cathinones</td>
<td>729</td>
<td>10</td>
</tr>
<tr>
<td>2011</td>
<td>Synthetic cannabinoids</td>
<td>22,989</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Synthetic cathinones</td>
<td>6,772</td>
<td>21</td>
</tr>
<tr>
<td>2012</td>
<td>Synthetic cannabinoids</td>
<td>32,504</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>Synthetic cathinones</td>
<td>11,275</td>
<td>31</td>
</tr>
</tbody>
</table>

As of January 31, 2013
As of May 2, 2013, the NFLIS system shows U.S. law enforcement encountering:

- 51 cannabinoids
- 31 cathinones
- 87 “other” compounds (i.e., 2C compounds, tryptamines, piperazines, etc.)
‘Spice’ makers alter recipes to sidestep state laws banning synthetic marijuana

Rob Ostermaier/Daily Press - Police show what they suspect is “spice,” confiscated during a raid on Outer Edge Gifts in Hampton, Va., on April 5.
Phenylalkylamines
Benzodiazepines
Piperazines
Arylcyclohexamines
Tryptamines
Econine Derivatives
Synthetic Cannabinoids
Anabolic agents

Benzyl-piperazines
BZP
MDBP
4-Bromo-2,5-diMeO-BZP
MBZP
MDBZP

Benzyl-piperazines

Phenyl-piperazine
5mCPP
TFMPP
MeOPP
pFPP

Phenyl-piperazine

PCPR
PCMPA
PCMEA
PCEA
PCEPA
5MeO-PCP
MXE
4Me-PCP
3MeO-PCE

PCPR
PCMPA
PCMEA
PCEA
PCEPA
5MeO-PCP
MXE
4Me-PCP
3MeO-PCE

AMT
DMT
DET
DPT
DiPT
4-OH-DiPT
5-NeO-DMT
5-NeO-DiPT
5-NeO-MePT
5-AcO-DiPT
5-NeO-DALT

4-Fluorotropacocaine
β-CFT

4-FA
3-FA
2-FA
N-Methyl-4-FA
N-Ethyl-4-FA
3-F-4-MeO-A

Steroids:
THG

SARMs:
Andarine
LGD-2226
Mk-2866

Eicosanoids:
Anandamide
Oleamide

Others
AKB48
URB597
CB-13

Modified from Wohlfarth and Weinmann, Bioanalysis, 2010
Emerging Drug Categories Reporting to NFLIS

Number of Reports

- Synthetic Cannabinoids
- Piperazines
- Synthetic Cathinones
- Tryptamines
- 2C-Phenethylamines

DEA Office of Diversion Control
American Association of Poison Control Centers (AAPCC) Reporting

Calls to poison centers for human exposures to synthetic marijuana (synthetic cannabinoids)

AAPCC as of December 31, 2012.
American Association of Poison Control Centers (AAPCC) Reporting

Calls to poison centers for human exposures to bath salts (synthetic cathinones)

Calls to U.S. Poison Control Centers

AAPCC as of December 31, 2012.

U.S. Drug Enforcement Administration / Operations Division / Office of Diversion Control
Where are People Getting their Information? / Example: Erowid
There are 23 **K2 SUMMIT spice** from 3 **suppliers** on Alibaba.com

Related Searches: K2 SUMMIT spice, smoke spice, herb spices, organic spices, Wholesale K2 SUMMIT spice

**K2 SUMMIT spice**

Other products by Type: Blended

- **FOB Price:** US $12 - 14 **Negotiable**
- **Port:** Longla
- **Minimum Order Quantity:** 100 Pack/Packs
- **Supply Ability:** 100 Kilogram/Kilograms per Week
- **Payment Terms:** T/T, Western Union, MoneyGram

**smoke wholesale**

[Cameroon]

Business Type: Distributor/Wholesaler

**Contact Details**

Online Showroom: 42 Products

Other Similar Products from this Supplier

View this Supplier's Website

U.S. Drug Enforcement Administration / Operations
Division / Office of Diversion Control
“The Plant Feed Shop”

U.S. Drug Enforcement Administration / Operations
Division / Office of Diversion Control
WE DO NOT SHIP BATH SALTS TO LOUISIANA OR FLORIDA!!
ORDERS FROM LOUISIANA AND FLORIDA WILL BE CANCELLED!!

If you like IVORY WAVE, VANILLA SKY, RECHARGE etc.. you are going to LOVE PURE IVORY  !!!

It has taken over a month but we finally received our shipment of Bath Salts. We will be adding "PURE IVORY" and "BOLIVIAN BATH" to our line. We were originally going to add "IVORY WAVE" but experienced major inconsistencies in quality from that product not to mention the fact that it is being heavily counterfeit in the UK and here in the USA...

PLEASE NOTE: Due to the concentrated nature of this product we strongly recommend that you purchase the 250mg size if you have never purchased this product before and that for the first few hours you only use one application (10-12mg). You will be surprised by how long it lasts -- there really is no need for a second application for hours. Once you have experienced PURE IVORY bath salts you will know how to apply in future.

It is also strongly recommended that you do not mix these bath salts with other similar products and for health and safety reasons its always best to stay away from alcohol and prescription medication, or be intoxicated when bathing using PURE IVORY or any other bath salts products.
Public Safety Concerns

• Driving Under the Influence of Drugs (DUIDs) with fatalities

• Suicides

• Homicide-Suicide

• Overdoses
  – Emergency Department visits
  – First Responders

• Drugs abused to evade drug screens
  – 30-35% of juveniles in drug court tested positive
  – Individuals subjected to routine drug screens
    • Probationer / parolees
Bangor man on bath salts carried assault-style rifle through city, police say

By Nok-Noi Ricker, BDN Staff
Posted July 27, 2011, at 12:50 p.m.

BANGOR, Maine — Police said they were called to Walter Street on Tuesday night to deal with a man acting erratically who reportedly had consumed the synthetic drug bath salts and took off carrying an assault-style rifle.

The man later was picked up carrying ammunition and showed police where he had stashed an M4 rifle wrapped in a blanket. Police, who did not identify the 31-year-old man or arrest him after questioning, said he may face charges.

A downstairs neighbor who identified herself as the man's ex-girlfriend told police at about 7:30 p.m. Tuesday that he had used bath salts and was "stating that people were coming out of his mattress."

When Bangor police, went into the man's Walter Street apartment, they saw an empty rifle case on the couch, Edwards said.

Police searched the apartment and surrounding area. Detective Brent Beaulieu and Officer Dan Sanborn found the man on Buck Street a few minutes later.

"When questioned about the rifle, the suspect gave up a location on Buck Street where he stated that the rifle was hidden in a shack," Edwards said. "Officers quickly found the location and did in fact find an M4 rifle in two pieces wrapped in a blanket. A subsequent search of the suspect's backpack netted a full magazine and 18 separate rounds of .223 [caliber] ammunition."

He did not tell police why he removed the gun from his apartment or what his plan was, the sergeant said, adding, "we did confiscate the gun."

A local agent of the federal Bureau of Alcohol, Tobacco, Firearms and Explosives was called and, along with Bangor police, interviewed the suspect.

The man was released Tuesday evening. The case is being reviewed for possible state and-or federal charges, Edwards said.

Warning!
First Responder Encounters

• Altered mental status presents as severe panic attacks, agitation, paranoia, hallucinations, and violent behavior (e.g., self-mutilation, suicide attempts, and homicidal activity). (Spiller et al., Clinical Toxicology 2011)
  
  — climbing into the attic of the home with a gun to kill demons that were hiding
  
  — breaking all the windows in a house and wandering barefoot through the broken glass
  
  — jumping out of a window to flee from non-existent pursuers; requiring electrical shock (Taser) and eight responders to initially subdue the patient
  
  — repeatedly firing guns out of the house windows at “strangers” who were not there

• Bath salts use tied to three Bangor (Maine) deaths. (Richter, JEMS 2012)

• Bath salt abuse: new designer drug keeps EMS crews busy nationwide. (Nevin, JEMS 2011)
Drug Endangered Children:

- Leaving a 2-year-old daughter in the middle of a highway because she had demons (Spiller et al., Clinical Toxicology 2011)

- A drug-intoxicated couple hallucinated they were being burglarized, began shooting into walls. Officers found weapons in every room, and a paranoid parent huddled inside the bathroom with two young children and a loaded .357 Magnum (Macher, American Jails 2011)

- Northeast PA, couple charged with multiple offenses for stabbing at “90-people living in their walls” with 5-year old present (Times-Leader.com, Mar 21, 2011)
Synthetic Drug “Manufacturing Facility”?
Synthetic Drug “Manufacturing Facility”?
Synthetic Drug “Manufacturing Facility”?
Control Efforts: Using all the “Tools” Available
Synthetic Drugs: U.S. State Controls

- Legislation
- Department of Health
- Pharmacy Board
- Consumer Affairs Dept.
U.S. Federal Scheduling & Rescheduling Procedures

Placement of a substance into one of the U.S. Federal Controlled Substance Act (CSA) schedules can be done by statute or through the administrative process.

- **Statute:** Congress may designate a substance a controlled substance or reschedule a drug within the scheduling hierarchy by passing legislation. This, by far, is the easiest method in which to add, remove or transfer a substance between schedules.

- **Administrative Process:** The Attorney General, by rule, (using his administrative authority) to add, remove or transfer a substance between schedules. The legal definition of control, “...means to add a drug or other substance, or immediate precursor, to a schedule...whether by transfer of another schedule or otherwise”. 21 USC 802(5)
Federal Temporary Scheduling

• Because of the lack of effective legislative controls to combat the synthetic problem early on, federally we looked to temporary scheduling as a solution

• Requires an AG finding (delegated down to DEA) that the scheduling of a substance in schedule I on a temporary basis is necessary to avoid an imminent hazard to the public safety

• ...and the substance is not listed in any other schedule in Section 21 USC 812 or no exemption or approval is in effect under the FDCA
Federal Temporary Scheduling
(Comprehensive Crime Control Act of 1984)

As set forth under 21 U.S.C 811(h), three factors (4, 5 &6) under the CSA (21 U.S.C. 811(c)) are to be considered in the evaluation

1. Its actual or relative potential for abuse
2. Scientific evidence of its pharmacological effects
3. The state of current scientific knowledge regarding the substance
4. Its history and current pattern of abuse
5. The scope, duration, and significance of abuse
6. What, if any, risk there is to the public health
7. Its psychic or physiological dependence liability
8. Whether the substance is an immediate precursor of a substance already controlled
Federal Temporary Scheduling Process

• DEA collects information from law enforcement and public health officials regarding encounters and evaluates this information relative to the three factors required for temporary scheduling.

• Once sufficient information has been collected, a letter is transmitted from DEA to the U.S. Department of Health & Human Services (DHHS) to communicate intention to temporary schedule [and to verify no active new drug applications (NDAs) or investigations drug applications (INDs) for the proposed substances filed].
Federal Temporary Scheduling Process

• DEA letter of intent to DHHS, solicits a comment to control these substances within 30 days. Based on the DHHS response, a “Notice of Intent” can be published in the U.S. Federal Register with a “Final Order” published at minimum 30-days after the “Notice of Intent”.

• As there is no “comment period” provided for temporary scheduling, civil and criminal sanctions applicable to the manufacture, possession, importation, and exportation are effective upon publication of the “Final Order”.

U.S. Drug Enforcement Administration / Operations Division / Office of Diversion Control
U.S. Federal Temporary Scheduling
Actions to Date Relative to Synthetic Drugs

- 5 Synthetic Cannabinoid Compounds
- 3 Synthetic Cathinone Compounds
- NEW ACTION: May 2013, a Federal Register Final Order Published temporarily controlling 3 additional Synthetic Cannabinoid Compounds (UR-144, XLR11, and AKB48).
U.S. Federal Temporary Scheduling
Actions to Date Relative to Synthetic Drugs

Since 2009, there has been a marked increase in the law enforcement encounters of various synthetic cannabinoids in the United States. Both drug enforcement and public health reports suggest the sustained popularity of these substances in the designer drug market, most commonly abused as plant material adulterants. These associated products are often being sold as "incense" and labeled "not for human consumption." Additionally, these products are marketed as "legal high" or "legal alternative to marijuana" and are readily available over the internet, in head shops, or sold in convenience stores.

These substances have no accepted medical use in the United States and have been reported to produce adverse effects in humans. Chronic abuse of synthetic cannabinoids in general has been linked to severe adverse effects including signs of alcohol and withdrawal. (Zimmermann et al., 2009; Muller et al., 2010), as well as numerous reports of emergency room admissions resulting from their abuse (Forster et al., 2011; Hermann-Giessen et al. 2011; SAMHSA, 2011).

The DEA law enforcement and drug enforcement have added 21 new substances to the list of scheduled drugs since 2009, including classes of compounds that are not currently classified as drugs. These new drugs are added to the list of scheduled substances in the Controlled Substances Act (CSA)

The DEA has requested that the Secretary of Health and Human Services (HHS) make a recommendation to the Attorney General (AG) to include the following drugs in Schedule I of the CSA: 1 - pentylenetetrazol (PTZ), 2,3,4,5-tetrahydrocannabinol (THC), 1-F-uracil, 1-(5-fluoropentyl)-3-(2,3,4,5-tetrahydrocannabinol) (5-fluoro-THC), 1-(5-fluoropentyl)-3-(2,3,4,5-tetrahydrocannabinol) (5-fluoro-THC), and 1-(5-fluoropentyl)-3-(2,3,4,5-tetrahydrocannabinol) (5-fluoro-THC).
On July 9, 2012, the President signed the Synthetic Drug Abuse Prevention Act of 2012 (Public Law 112-144)

- The law controlled 26 compounds into schedule I
U.S. Synthetic Drug Abuse Prevention Act of 2012

- Defined the term “Cannabimimetic Agent” [any substance that is a cannabinoid receptor type 1 (CB1 receptor) agonist].

- Extends the maximum time that DEA may temporarily control a substance.

- Initial time period for temporary scheduling increased from 12 to 24 months / Extension period increased from 6 months to 12 months.
## U.S. Synthetic Drug Abuse and Prevention Act 2012

### Cannabinoids

1) AM2201  
2) AM694  
3) CP-47,497  
4) CP-47,497 – C8 homologue  
5) JWH-018  
6) JWH-073  
7) JWH-081

### Cathinones

1) Mephedrone  
2) MDPV

### Phenethylamines

1) 2C–E  
2) 2C–D  
3) 2C–C  
4) 2C–I  
5) 2C–T–2  
6) 2C–T–4  
7) 2C–H  
8) 2C–N  
9) 2C–P

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DEA Office of Diversion Control
The Controlled Substance Analogue Act

- Synthetic cannabinoids are sold as “potpourri” or “incense” products at retail outlets and on the Internet.

- Synthetic cathinones are sold as “bath salts”, “jewelry cleaner” and “plant food” at retail outlets and on the Internet.

- One reason for this marketing strategy is that traffickers think they are overcoming one of the major prongs of the Act.
The Controlled Substance Analogue Act

21 USC 813 – A Controlled Substance Analogue, shall, to the extent intended for human consumption, be treated for the purposes for any Federal law as a controlled substance in Schedule I.

21 USC 802(32) – chemical structure is substantially similar to a controlled substance in schedule I or II and has a similar pharmacologic effect.
The Controlled Substance Analogue Act: Proving Substantial Similarity

• Requires proof of substantial similarity both with respect to chemical structure and actual or represented pharmacological effect. The “intended for human consumption” requirement is often demonstrated by law enforcement investigations.

• The substantial similarity standard often results in a battle of the experts, which is resource intensive and highly unpredictable.

• Constitutional issues (e.g., vagueness) also often come into play.
Operation “Log Jam” (July 2012)

Goals of Operation

- Target manufacturers, wholesale distributors, and retail distributors
- Develop information about foreign sources of supply
- Raise public awareness
- Develop leads for Phase II initiative

- 66 DEA Investigations
- 15 ICE/HSI Investigations
Operation “Log Jam”
Results of Operation

- 97 Arrests
- 265 Search warrants
- 1,085 pounds raw synthetic cathinones
- 167,712 packets of synthetic cathinones
- 5.3 million packets of synthetic cannabinoids
- 1,909 pounds raw synthetic cannabinoids
- 10,487 pounds of treated plant material
- 48,253 pounds of untreated plant material
- More than $40,000,000 US Currency/bank accounts
- Vehicles/value 57/$1,973,500
- Other Assets $5,688,500
- 47 Firearms
- 1096 gallons of acetone seized
Initiated in December 2012 to provide for operational focus of synthetic drug investigations.

Project Synergy is a joint operation being conducted by DEA, HSI, FBI, CBP, and the IRS.

This project has expanded to include some of our international partners with joint operations being conducted with Australia, New Zealand, Canada, and Barbados.
Project Synergy Goals:

- Target both the domestic processing sites and distributors, along with the foreign sources of supply

- Target financial infrastructure of the organizations

- Target shipping and transportation of drugs and identify organic plant material as well as packaging material
## Project Synergy
### Results of Operation

Final totals for project since December 1, 2012

<table>
<thead>
<tr>
<th>Item</th>
<th>June 26, 2013</th>
<th>Total in Project Synergy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cash and assets</td>
<td>$36,750,719</td>
<td>$51,585,400</td>
</tr>
<tr>
<td>Packaged Synthetics (kg)</td>
<td>9,321</td>
<td>9,445</td>
</tr>
<tr>
<td>Cathinones (kg)</td>
<td>286</td>
<td>299</td>
</tr>
<tr>
<td>Cannabinoids (kg)</td>
<td>162</td>
<td>1252</td>
</tr>
<tr>
<td>Treated Plant Material (kg)</td>
<td>274</td>
<td>783</td>
</tr>
<tr>
<td>Weapons</td>
<td>123</td>
<td>140</td>
</tr>
<tr>
<td>Vehicles</td>
<td>115</td>
<td>131</td>
</tr>
<tr>
<td>Consents</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Arrests</td>
<td>165</td>
<td>227</td>
</tr>
<tr>
<td>Search Warrants</td>
<td>368</td>
<td>416</td>
</tr>
</tbody>
</table>
The Way Forward on the International Front

- Working to identify major foreign based sources

- Working to sensitize partner nations regarding the threat and the need for international controls

- Continue to work bilaterally and with international partners to look at coordinating global outreach and cooperation
The Way Forward on the International Front / CND Resolutions

Enhancing International Cooperation in the Identification & Reporting of NPS

(E/CN.7/2013/L.2/ March 2013)
Thank You / Questions