

## AB-FUBINACA

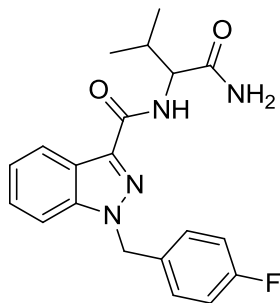
April 2014  
DEA/OD/ODE

### Introduction:

Various synthetic cannabinoids (e.g., JWH-018, UR-144, AKB48, etc.) laced on plant material have been encountered by law enforcement in recent years. These products laced with synthetic cannabinoids are smoked for their psychoactive effects. In response to State and Federal control of these synthetic cannabinoids, a transition to new synthetic cannabinoids laced on plant material has been observed. AB-FUBINACA is a synthetic cannabinoid recently encountered on the designer drug market and has been found laced on plant material and marketed under the guise of herbal incense products.

### Chemistry:

The chemical structure for AB-FUBINACA<sup>1</sup> is shown below.



AB-FUBINACA is classified as an indazole. AB-FUBINACA is based on an indazole core structure where the 1- and 3-positions of the indazole ring system are substituted. The 1-position of AB-FUBINACA is substituted with a para-fluorobenzyl group. The 3-position is substituted with an amide linker, and the nitrogen atom (N) of this linker is further substituted with an acyclic alkyl amide, named 1-amino-3-methyl-1-oxobutan-2-yl.

### Pharmacology:

A patent submitted by Pfizer in 2009 demonstrates that AB-FUBINACA has a high affinity and functions as an agonist to the CB1 receptor. Studies were conducted by contract researchers with the National Institute on Drug Abuse (NIDA). These studies show that AB-FUBINACA also binds to and is an agonist at the CB1 receptor. In drug discrimination studies in rats, AB-FUBINACA generalized to Δ<sup>9</sup>-THC, i.e. produced subjective effects similar to those of Δ<sup>9</sup>-THC.

There are no published studies on the safety of AB-FUBINACA for human use.

### Licit Uses:

AB-FUBINACA was previously reported in a patent by Pfizer in 2009. There are no commercial or medical uses for this substance.

### Illicit Uses:

AB-FUBINACA has been encountered in numerous synthetic cannabinoid products that are smoked for their psychoactive effects.

### User Population:

Information on user population in the U.S. is limited. AB-FUBINACA abuse is not monitored by any national drug abuse surveys. Poison control centers continue to report adverse health effects in response to the abuse of synthetic cannabinoids and this abuse is both a public health and safety concern.

### Illicit Distribution:

The System to Retrieve Information from Drug Evidence (STRIDE), a federal database for the seized drugs analyzed by DEA forensic laboratories, and the National Forensic Laboratory Information System (NFLIS), a system that collects drug analysis information from state and local forensic laboratories, contain 896 reports in 2013. Bulk quantities and plant material (synthetic cannabinoid products) laced with AB-FUBINACA have been encountered.

### Control Status

AB-FUBINACA is a Schedule I controlled substance under the Federal Controlled Substances Act.

Comments and additional information are welcomed by the Drug and Chemical Evaluation Section; Fax 202-353-1263, telephone 202-307-7183, or E-mail ODE@usdoj.gov.

<sup>1</sup> Chemical name: N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide