

EMB-FUBINACA (AEB-FUBINACA; FUB-AEB)

February 2020

Introduction:

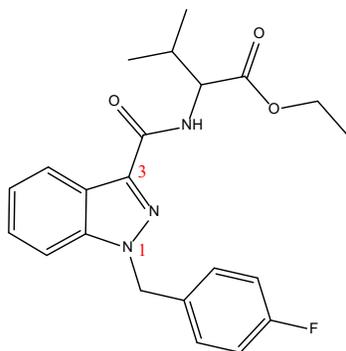
In recent years, various products containing synthetic cannabinoids (e.g., JWH-018, UR-144, AKB48, etc.) laced on plant material have been encountered by law enforcement and are smoked for their psychoactive effects. In response to Federal control of these synthetic cannabinoids, a transition to new synthetic cannabinoids laced on plant material has been observed. EMB-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.

Licit Uses:

There are no commercial or medical uses for EMB-FUBINACA.

Chemistry:

The chemical structure for EMB-FUBINACA¹ is shown below.



EMB-FUBINACA is classified as an indazole. EMB-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 EMB-FUBINACA is substituted with a 4-fluorobenzyl group. The 3-position is substituted with an amide linker, and the nitrogen atom (N) of this linker is further substituted with a 1-ethoxy-3-methyl-1-oxobutan-2-yl group.

Pharmacology:

Data from preclinical studies show that EMB-FUBINACA binds to and acts as an agonist at the CB1 receptor.

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

Illicit Uses:

EMB-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. EMB-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. Serious adverse effects have been reported following the use of EMB-FUBINACA.

Illicit Distribution:

The National Forensic Laboratory Information System (NFLIS), a system that collects drug analysis information from state and local forensic laboratories, contain 109 reports for EMB-FUBINACA between 2015 and 2018.

Control Status:

EMB-FUBINACA is a positional isomer of MDMB-FUBINACA (methyl 2-(1-(4-fluorobenzyl)-1H-indazole-3-carboxamido)-3,3-dimethylbutanoate), as defined by 21 CFR § 1300.01, and is therefore a Schedule I controlled substance under the Federal Controlled Substances Act as of April 10, 2017.

¹ Chemical name: ethyl 2-(1-(4-fluorobenzyl)-1H-indazole-3-carboxamido)-3-methylbutanoate

Comments and additional information are welcomed by the Drug and Chemical Evaluation Section; Fax 571-362-4250, Telephone 571-362-3249, or Email DPE@usdoj.gov.