



## DEPARTMENT OF JUSTICE

### Drug Enforcement Administration

#### 21 CFR Part 1308

[Docket No. DEA-806]

### Schedules of Controlled Substances: Placement of Four Specific Fentanyl-Related Substances in Schedule I

**AGENCY:** Drug Enforcement Administration, Department of Justice.

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** The Drug Enforcement Administration proposes placing ethyl (1-phenethylpiperidin-4-yl)(phenyl)carbamate (fentanyl carbamate), *N*-(2-fluorophenyl)-*N*-(1-phenethylpiperidin-4-yl)acrylamide (*ortho*-fluoroacryl fentanyl), *N*-(2-fluorophenyl)-*N*-(1-phenethylpiperidin-4-yl)isobutyramide (*ortho*-fluoroisobutyryl fentanyl), and *N*-(4-fluorophenyl)-*N*-(1-phenethylpiperidin-4-yl)furan-2-carboxamide (*para*-fluoro furanyl fentanyl), including their isomers, esters, ethers, salts, and salts of isomers, esters, and ethers, in schedule I of the Controlled Substances Act. These four specific substances fall within the definition of fentanyl-related substances set forth in the February 6, 2018, temporary scheduling order. Through the Temporary Reauthorization and Study of the Emergency Scheduling of Fentanyl Analogues Act, which became law on February 6, 2020, Congress extended the temporary control of fentanyl-related substances until May 6, 2021. If finalized, this action would make permanent the existing regulatory controls and administrative, civil, and criminal sanctions applicable to schedule I controlled substances on persons who handle (manufacture, distribute, reverse distribute, import, export, engage in research, conduct instructional activities or chemical analysis, or possess), or propose to handle fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl.

**DATES:** Comments must be submitted electronically or postmarked on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Requests for hearing and waivers of an opportunity for a hearing or to participate in a hearing must be received on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** To ensure proper handling of comments, please reference “Docket No. DEA-806” on all electronic and written correspondence, including any attachments.

- *Electronic comments:* Interested persons may file written comments on this proposal in accordance with 21 CFR 1308.43(g). The Drug Enforcement Administration (DEA) encourages that all comments be submitted electronically through the Federal eRulemaking Portal which provides the ability to type short comments directly into the comment field on the Web page or to attach a file for lengthier comments. Please go to <http://www.regulations.gov> and follow the online instructions at that site for submitting comments. Upon completion of your submission you will receive a Comment Tracking Number for your comment. Please be aware that submitted comments are not instantaneously available for public view on *Regulations.gov*. If you have received a Comment Tracking Number, your comment has been successfully submitted and there is no need to resubmit the same comment. Commenters should be aware that the electronic Federal Docket Management System will not accept comments after 11:59 p.m. Eastern Time on the last day of the comment period.

- *Paper comments:* Paper comments that duplicate the electronic submission are not necessary. Should you wish to mail a paper comment *in lieu of* an electronic comment, it should be sent via regular or express mail to: Drug Enforcement Administration, Attn: DEA Federal Register Representative/DPW, 8701 Morrisette Drive, Springfield, Virginia 22152.

- *Hearing requests:* Interested persons may file a request for hearing or waiver of hearing pursuant to 21 CFR 1308.44 and in accordance with 21 CFR 1316.45 and/or 1316.47, as applicable. All requests for hearing and waivers of participation must be sent to: Drug Enforcement Administration, Attn: Administrator, 8701 Morrisette Drive, Springfield, Virginia 22152. All requests for hearing and waivers of participation should also be sent to: (1) Drug Enforcement Administration, Attn: Hearing Clerk/OALJ, 8701 Morrisette Drive, Springfield, Virginia 22152; and (2) Drug Enforcement Administration, Attn: DEA Federal Register Representative/DPW, 8701 Morrisette Drive, Springfield, Virginia 22152.

**FOR FURTHER INFORMATION CONTACT:** Terrence L. Boos, Drug and Chemical Evaluation Section, Diversion Control Division, Drug Enforcement Administration; Mailing Address: 8701 Morrisette Drive, Springfield, Virginia 22152; Telephone: (571) 362-3249.

**SUPPLEMENTARY INFORMATION:**

**Posting of Public Comments**

Please note that all comments received in response to this docket are considered part of the public record. They will, unless reasonable cause is given, be made available by the Drug Enforcement Administration (DEA) for public inspection online at <http://www.regulations.gov>. Such information includes personal identifying information (such as your name, address, etc.) voluntarily submitted by the commenter. The Freedom of Information Act applies to all comments received. If you want to submit personal identifying information (such as your name, address, etc.) as part of your comment, but do not want it to be made publicly available, you must include the phrase “PERSONAL IDENTIFYING INFORMATION” in the first paragraph of your comment. You must also place all of the personal identifying information you do not want made publicly

available in the first paragraph of your comment and identify what information you want redacted.

If you want to submit confidential business information as part of your comment, but do not want it to be made publicly available, you must include the phrase “CONFIDENTIAL BUSINESS INFORMATION” in the first paragraph of your comment. You must also prominently identify confidential business information to be redacted within the comment.

Comments containing personal identifying information and confidential business information identified as directed above will be made publicly available in redacted form. If a comment has so much confidential business information or personal identifying information that it cannot be effectively redacted, all or part of that comment may not be made publicly available. Comments posted to *http://www.regulations.gov* may include any personal identifying information (such as name, address, and phone number) included in the text of your electronic submission that is not identified as directed above as confidential.

An electronic copy of this document and supplemental information to this proposed rule are available at *http://www.regulations.gov* for easy reference.

### **Request for Hearing or Waiver of Participation in a Hearing**

Pursuant to 21 U.S.C. 811(a), this action is a formal rulemaking “on the record after opportunity for a hearing.” Such proceedings are conducted pursuant to the provisions of the Administrative Procedure Act, 5 U.S.C. 551–559. 21 CFR 1308.41–1308.45; 21 CFR part 1316, subpart D. Interested persons may file requests for hearing or notices of intent to participate in a hearing in conformity with the requirements of 21 CFR 1308.44(a) or (b), and include a statement of interest in the proceeding and the objections or issues, if any, concerning which the person desires to be heard. Any interested person may file a waiver of an opportunity for a hearing or to participate in a

hearing together with a written statement regarding the interested person's position on the matters of fact and law involved in any hearing as set forth in 21 CFR 1308.44(c).

All requests for a hearing and waivers of participation must be sent to DEA using the address information provided above.

### **Legal Authority**

The Controlled Substances Act (CSA) provides that proceedings for the issuance, amendment, or repeal of the scheduling of any drug or other substance may be initiated by the Attorney General (delegated to the Administrator of DEA pursuant to 28 CFR 0.100) on his own motion. 21 U.S.C. 811(a). This proposed action is supported by a recommendation from the Acting Assistant Secretary for Health of U.S. Department of Health and Human Services (HHS) (Acting Assistant Secretary) and an evaluation of all other relevant data by DEA. If finalized, this action would make permanent the existing temporary regulatory controls and administrative, civil, and criminal sanctions of schedule I controlled substances on any person who handles or proposes to handle fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl.

### **Background**

On February 6, 2018, pursuant to 21 U.S.C. 811(h)(1), the then-Acting Administrator of DEA published an order in the *Federal Register* (83 FR 5188) temporarily placing fentanyl-related substances, as defined in that order, in schedule I of the CSA upon finding that these substances pose an imminent hazard to the public safety. As discussed below in Factor 3, the four substances named in this proposed rule (fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl) meet the existing definition of fentanyl-related substances as they are not otherwise controlled in any other schedule (i.e., not included under another

Administration Controlled Substance Code Number) and are structurally related to fentanyl by one or more of the five modifications listed under the definition.

That temporary order was effective upon the date of publication. Pursuant to 21 U.S.C. 811(h)(2), the temporary control of fentanyl-related substances, a class of substances as defined in the order, as well as the four specific substances already covered by that order, was set to expire on February 6, 2020. However, as explained in DEA's April 10, 2020, correcting amendment (85 FR 20155), Congress overrode and extended that expiration date until May 6, 2021, by enacting on February 6, 2020 the Temporary Reauthorization and Study of the Emergency Scheduling of Fentanyl Analogues Act (Pub. L. 116-114, sec. 2, 134 Stat. 103). By operation of law, the temporary control of fentanyl-related substances, which includes these four covered substances, will remain in effect until May 6, 2021, unless DEA permanently places them in schedule I prior to May 6, 2021. As discussed in the above Legal Authority section, proceedings under 21 U.S.C. 811(a) may be initiated by the Administrator of DEA on his own motion.

The Acting Administrator, on his own motion, is initiating proceedings to permanently schedule the following four fentanyl-related substances: fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl. DEA gathered the available information regarding the pharmacology, chemistry, trafficking, actual abuse, pattern of abuse, and the relative potential for abuse for 16 fentanyl-related substances (the four that are the subject of this proposed rule as well as 12 other fentanyl-related substances<sup>1</sup>). On April 3, and October 2, 2019, the then-Acting Administrator submitted this data to the Assistant Secretary for Health of HHS, and requested that HHS provide DEA with a scientific and medical evaluation and a scheduling recommendation for these 16 fentanyl-related substances, in accordance with

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<sup>1</sup> 2'-fluoro *ortho*-fluorofentanyl, 4'-methyl acetyl fentanyl,  $\beta'$ -phenyl fentanyl,  $\beta$ -methyl fentanyl, benzodioxole fentanyl, crotonyl fentanyl, *ortho*-fluorobutyryl fentanyl, *ortho*-methyl acetylfentanyl, *ortho*-methyl methoxyacetylfentanyl, *para*-methylfentanyl, phenyl fentanyl, and thiofuranyl fentanyl.

21 U.S.C. 811(b) and (c). On July 2, 2020, HHS provided DEA with a scientific and medical evaluation and scheduling recommendation for 11 of the 12<sup>2</sup> other fentanyl-related substances (none of which included the four substances named in this proposed rule). In October 2020 and March 2021, DEA issued two scheduling actions for these 11 substances, with one action permanently controlling one of the 11 substances, and another action proposing the continued control of 10 substances.<sup>3</sup>

On March 2, 2021, the Acting Assistant Secretary submitted to the Acting Administrator, HHS's scientific and medical evaluation and scheduling recommendation for the four fentanyl-related substances named in this proposed rule. Upon receipt of the scientific and medical evaluation and scheduling recommendation from HHS, DEA reviewed these documents and all other relevant data, and conducted its own eight-factor analysis of the abuse potential of the four substances in accordance with 21 U.S.C. 811(c).

**Proposed Determination to Permanently Schedule fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl**

As discussed in the background section, the Acting Administrator is initiating proceedings to permanently add fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl to schedule I. DEA has reviewed the scientific and medical evaluation and scheduling recommendation from HHS, and all other relevant data, and conducted its own eight-factor analysis of the abuse

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<sup>2</sup> HHS' scientific and medical evaluation for benzodioxole fentanyl is ongoing. DEA will not further discuss this substance in this proposed rule.

<sup>3</sup> On October 2, 2020, DEA issued a final order (85 FR 62215) for crotonyl fentanyl and maintained its placement in schedule I, using DEA's authority under 21 U.S.C. 811(d)(1), to meet obligations under the 1961 Single Convention on Narcotic Drugs, March 30, 1961, 18 U.S.T. 1407, 570 U.N.T.S. 151, as amended. On March 3, 2021, DEA issued a general notice of proposed rulemaking (86 FR 12296) to permanently control 2'-fluoro *ortho*-fluorofentanyl, 4'-methyl acetyl fentanyl,  $\beta$ -methyl fentanyl,  $\beta'$ -phenyl fentanyl, *ortho*-fluorobutyryl fentanyl, *ortho*-methyl acetylfentanyl, *ortho*-methyl methoxyacetyl fentanyl, *para*-methylfentanyl, phenyl fentanyl, and thiofuranyl fentanyl in schedule I.

potential of these four substances. Included below is a brief summary of each factor as analyzed by HHS and DEA, and as considered by DEA in its proposed scheduling action. Please note that both the DEA and HHS 8-Factor analyses and the Acting Assistant Secretary's March 2, 2021, letter are available in their entirety under the tab "Supporting Documents" of the public docket for this action at <http://www.regulations.gov> under Docket Number "DEA-806."

1. *The Drug's Actual or Relative Potential for Abuse*: The term "abuse" is not defined in the CSA. However, the legislative history of the CSA suggests that DEA consider the following criteria when determining whether a particular drug or substance has a potential for abuse:<sup>4</sup>

- a) *There is evidence that individuals are taking the drug or drugs containing such a substance in amounts sufficient to create a hazard to their health or to the safety of other individuals or to the community; or*
- b) *There is significant diversion of the drug or drugs containing such a substance from legitimate drug channels; or*
- c) *Individuals are taking the drug or drugs containing such a substance on their own initiative rather than on the basis of medical advice from a practitioner licensed by law to administer such drugs in the course of his professional practice; or*
- d) *The drug or drugs containing such a substance are new drugs so related in their action to a drug or drugs already listed as having a potential for abuse to make it likely that the drug will have the same potentiality for abuse as such drugs, thus making it reasonable to assume that there may be significant diversions from legitimate channels, significant use contrary to or without medical advice, or that it has a substantial capability of creating hazards to the health of the user or to the safety of the community.*

The abuse potential of fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl is associated with their pharmacological similarity to other schedule I (acetyl fentanyl and furanyl fentanyl) and

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<sup>4</sup> Comprehensive Drug Abuse Prevention and Control Act of 1970, H.R. REP. NO. 91-1444, 91st Cong., Sess. 1 (1970); *reprinted in* 1970 U.S.C.C.A.N. 4566, 4603.

II mu-opioid receptor agonist substances, which have a high potential for abuse. Similar to schedule II substances morphine and fentanyl, these four fentanyl-related substances have been shown to bind and act as mu-opioid receptor agonists.

These four substances have no approved medical use in the United States and have been encountered on the illicit drug market. The use of some fentanyl-related substances has been associated with adverse health outcomes, including death. The appearance of several substances structurally related to fentanyl in the illicit drug market has resulted in a significant increase in drug overdose deaths in the United States. According to the Centers for Disease Control and Prevention (CDC) overdose death data for 2019, there continues to be an increase in the number of deaths related to synthetic opioids. Opioids were involved in about 71 percent of all drug-involved overdose deaths in 2019. Further, CDC reports demonstrate that the increase in synthetic opioid overdose deaths are largely attributed to an increase in the supply of illicitly manufactured fentanyl and substances structurally related to fentanyl. Because fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl are not Food and Drug Administration (FDA)-approved drug products, a practitioner may not legally prescribe them, and these substances cannot be dispensed to an individual. Therefore, the use of fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl is without medical advice, and accordingly leads to the conclusion that these four substances are abused for their opioidergic properties.

There are no legitimate drug channels for fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl as marketed FDA-approved drug products, but these substances are available for purchase from legitimate chemical companies for research purposes. However, despite the limited legitimate research use of these four substances, reports from public health and law

enforcement data indicate that all four substances are being abused and taken in amounts sufficient to create a hazard to an individual's health. Data from forensic databases can be used as an indicator of illicit activity with drugs and abuse<sup>5</sup> within the United States. According to the National Forensic Laboratory Information System (NFLIS),<sup>6</sup> which collects and analyzes drug exhibits submitted to Federal, State, and local forensic laboratories, there were 187 total reports of these substances between 2017 and 2020 (queried on February 22, 2021). Consequently, the positive identification of the four fentanyl-related substances in law enforcement encounters indicates that these substances are being abused, and thus pose safety hazards to the health of users.

2. *Scientific Evidence of the Drug's Pharmacological Effects, if Known:*

Fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl are pharmacologically similar to other schedule I and schedule II mu-opioid receptor agonist substances. The abuse potential (assessed by drug discriminative studies) of fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl show that these substances share discriminative stimulus effects similar to fentanyl and morphine. Similar to schedule I and II opioid analgesics, these four substances bind to and activate the mu-opioid receptor. Additionally, behavioral studies in animals demonstrate these four substances produce analgesic effects similar to fentanyl and morphine. Pre-treatment with naltrexone, an opioid antagonist, attenuated analgesic effect of these four substances, as well as fentanyl and morphine. These data indicate that the four substances are mu-opioid receptor agonists with effects on the central nervous system. Data from drug discrimination studies showed that these four substances share discriminative stimulus

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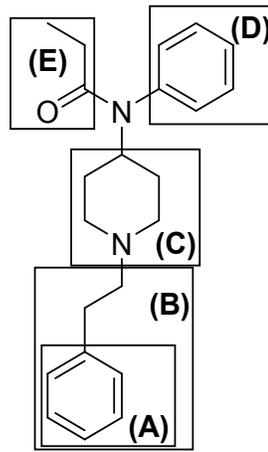
<sup>5</sup> While law enforcement data is not direct evidence of abuse, it can lead to an inference that a drug has been diverted and abused. *See* 76 FR 77330, 77332, Dec. 12, 2011.

<sup>6</sup> NFLIS is a DEA program and a national forensic laboratory reporting system that systematically collects results from drug chemistry analyses conducted by state and local forensic laboratories in the United States. The NFLIS database also contains Federal data from U.S. Customs and Border Protection. NFLIS only includes drug chemistry results from completed analyses.

effects similar to those of morphine. Thus, it is concluded from *in vitro* and *in vivo* pharmacological studies that the effects of the four substances are similar to that of fentanyl and morphine and are mediated by mu-opioid receptor agonism.

3. *The State of Current Scientific Knowledge Regarding the Drug or Other Substance*: Fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl are synthetic opioids of the 4-anilidopiperidine structural class, which includes fentanyl. As defined in the February 6, 2018, temporary order, fentanyl-related substances include any substance not otherwise controlled in any schedule (*i.e.*, not included under any other Administration Controlled Substance Code Number) that is structurally related to fentanyl by one or more of the following modifications:

- (A) Replacement of the phenyl portion of the phenethyl group by any monocycle, whether or not further substituted in or on the monocycle;
- (B) Substitution in or on the phenethyl group with alkyl, alkenyl, alkoxy, hydroxyl, halo, haloalkyl, amino or nitro groups;
- (C) Substitution in or on the piperidine ring with alkyl, alkenyl, alkoxy, ester, ether, hydroxyl, halo, haloalkyl, amino or nitro groups;
- (D) Replacement of the aniline ring with any aromatic monocycle whether or not further substituted in or on the aromatic monocycle; and/or
- (E) Replacement of the *N*-propionyl group by another acyl group.



**Figure 1: Regions of the chemical structure of fentanyl described in the definition of a fentanyl-related substance**

According to the February 6, 2018, temporary scheduling order, the existence of a substance with any one, or any combination, of above-mentioned modifications (see Figure 1) would meet the structural requirements of the definition of fentanyl-related substances. The present four substances fall within the definition of fentanyl-related substances by the following modifications:

1. Fentanyl carbamate: replacement of the *N*-propionyl group by another acyl group (meets definition for modification E);
2. *ortho*-fluoroacryl fentanyl: substitution on the aniline ring and replacement of the *N*-propionyl group with another acyl group (meets definition for modifications D and E);
3. *ortho*-fluoro isobutyryl fentanyl: substitution on the aniline ring and replacement of the *N*-propionyl group with another acyl group (meets definition for modifications D and E);
4. *para*-fluoro furanyl fentanyl: substitution on the aniline ring and replacement of the *N*-propionyl group with another acyl group (meets definition for modifications D and E).

No study has been undertaken to evaluate the efficacy, toxicology, and safety of the four substances in humans. It can be inferred from data obtained from animal studies that these four substances have sufficient distribution to the brain to produce depressant effects similar to that of other mu-opioid receptor agonists such as fentanyl. Data from *in*

*vitro* receptor binding studies show that these four substances, similar to fentanyl, display high selectivity for the mu-opioid receptor over other opioid receptor subtypes.

There are no FDA-approved marketing applications for a drug product containing fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl for any therapeutic indication in the United States. Moreover, there are no clinical studies or petitions which have claimed an accepted medical use in the United States for these four substances.

4. *Its History and Current Pattern of Abuse:* Fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl, like other substances structurally related to fentanyl, are disguised as a “legal” alternative to fentanyl. Between 2017 and 2020, law enforcement officials in the United States encountered these four substances.

5. *The Scope, Duration, and Significance of Abuse:* Fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl, similar to other substances structurally related to fentanyl, are often used as recreational drugs. The recreational use of these four substances and other fentanyl-related substances continues to be of significant concern as the United States currently is in the midst of an opioid epidemic. These substances are distributed to users, often with unpredictable outcomes. Because users of these fentanyl-related substances and their associated drug products are likely to obtain these substances through unregulated sources, the identity, purity, and quantity are uncertain and inconsistent, thus posing significant adverse health risks to abusers. Evidence that these four substances are being abused and trafficked is confirmed by law enforcement encounters. NFLIS contained 187 reports of fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl from Federal, State, and local forensic laboratories between 2017 and 2020.

6. *What, if Any, Risk There Is to the Public Health:* The increase in opioid overdose deaths in the United States has been exacerbated by the availability of potent synthetic opioids such as fentanyl and structurally related substances in the illicit drug market. These substances have a history of being trafficked as replacements for heroin and other synthetic opioids. Increasingly, law enforcement has encountered fentanyl and substances structurally related to fentanyl in counterfeit prescription opioids, heroin, and other street drugs such as cocaine, methamphetamine, and synthetic cannabinoids. Fentanyl is a potent synthetic opioid that is primarily prescribed for acute and chronic pain and is approximately 100 times more potent than morphine. As such, fentanyl has a high risk of abuse, dependence, and overdose that can lead to death. Because fentanyl-related substances, as defined in the February 6, 2018, temporary order, have similar chemical structure to fentanyl, these substances are expected to have similar biological effects. In *in vitro* and *in vivo* studies, fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl produced pharmacological effects similar to fentanyl. Thus, these four substances pose the same qualitative public health risks as heroin, fentanyl, and other mu-opioid receptor agonists.

According to a CDC report, from 2013 to 2019, deaths involving synthetic opioids other than methadone increased by 1,040 percent from 3,105 to 36,359. The increase in the number of opioid-related deaths was primarily driven by illicitly manufactured fentanyl<sup>7</sup>. According to CDC 2019 data, there were 70,630 drug overdose fatalities; of those, 49,860 (approximately 71 percent) involved an opioid. The use of some fentanyl-related substances has been associated with adverse health outcomes, including death.

7. *Its Psychic or Physiological Dependence Liability:* There are no pre-clinical

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<sup>7</sup> If evidence of prescription or illicit use was not available, fentanyl was categorized as illicitly-manufactured fentanyl (“IMF”) because the vast majority of fentanyl overdose deaths involve IMF. Gladden RM, O'Donnell J, Mattson CL, Seth P. Changes in Opioid-Involved Overdose Deaths by Opioid Type and Presence of Benzodiazepines, Cocaine, and Methamphetamine - 25 States, July-December 2017 to January-June 2018. MMWR Morb Mortal Wkly Rep. 30; 68(34):737-744.

and clinical studies that have evaluated the dependence potential of fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl. These four substances are mu-opioid receptor agonists, and discontinuation of the use of mu-opioid receptor agonists such as fentanyl and morphine is known to cause withdrawal indicative of physical dependence. Opioid withdrawal includes nausea and vomiting, depression, agitation, anxiety, craving, sweats, hypertension, diarrhea, and fever.

8. *Whether the Substance Is an Immediate Precursor of a Substance Already Controlled Under the CSA:* Fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl are not considered immediate precursors of any controlled substance of the CSA as defined by 21 U.S.C. 802(23).

*Conclusion:* After considering the scientific and medical evaluation conducted by HHS, HHS's scheduling recommendation, and DEA's own eight-factor analysis, DEA finds that the facts and all relevant data constitute substantial evidence of the potential for abuse of fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl. As such, DEA hereby proposes to permanently schedule fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl in schedule I of the CSA.

### **Proposed Determination of Appropriate Schedule**

The CSA establishes five schedules of controlled substances known as schedules I, II, III, IV, and V. The CSA also outlines the findings required to place a drug or other substance in any particular schedule. 21 U.S.C. 812(b). After consideration of the analysis and recommendation of the Acting Assistant Secretary for Health of HHS and review of all other available data, the Acting Administrator of DEA, pursuant to 21 U.S.C. 811(a) and 21 U.S.C. 812(b)(1), finds that:

**1) Fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl have a high potential for abuse.**

According to HHS, fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl, similar to fentanyl, are mu-opioid receptor agonists. These substances have analgesic effects, and these effects are mediated by mu-opioid receptor agonism. HHS states that substances that produce mu-opioid receptor agonist effects in the central nervous system (*e.g.*, morphine and fentanyl) are considered as having a high potential for abuse. Data obtained from drug discrimination studies indicate that fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl fully substituted for the discriminative stimulus effects of morphine.

**2) Fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl have no currently accepted medical use in treatment in the United States.**

According to HHS, there are no FDA-approved new drug applications for fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl in the United States. There are no known therapeutic applications for these fentanyl-related substances and thus they have no currently accepted medical use in the United States.<sup>8</sup>

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<sup>8</sup> Although there is no evidence suggesting that fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl have a currently accepted medical use in treatment in the United States, it bears noting that a drug cannot be found to have such medical use unless DEA concludes that it satisfies a five-part test. Specifically, with respect to a drug that has not been approved by FDA, to have a currently accepted medical use in treatment in the United States, all of the following must be demonstrated:

- i. the drug's chemistry must be known and reproducible;
- ii. there must be adequate safety studies;
- iii. there must be adequate and well-controlled studies proving efficacy;
- iv. the drug must be accepted by qualified experts; and

**3) There is a lack of accepted safety for use of fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl under medical supervision.**

Because fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl have no FDA-approved medical use and have not been thoroughly investigated as new drugs, their safety for use under medical supervision is undetermined. Thus, there is a lack of accepted safety for use of fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl under medical supervision.

Based on these findings, the Acting Administrator of DEA concludes that fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl, including their isomers, esters, ethers, salts, and salts of isomers, esters, and ethers, warrant continued control in schedule I of the CSA. 21 U.S.C. 812(b)(1).

**Requirements for Handling fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl.**

If this rule is finalized as proposed, fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl would continue<sup>9</sup> to be subject to the CSA's schedule I regulatory controls and administrative, civil, and criminal sanctions applicable to the manufacture, distribution, reverse distribution, dispensing, importation, exportation, research, and conduct of instructional activities, including the following:

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v. the scientific evidence must be widely available.

57 FR 10499 (1992), *pet. for rev. denied*, *Alliance for Cannabis Therapeutics v. DEA*, 15 F.3d 1131, 1135 (D.C. Cir. 1994).

<sup>9</sup> Fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl, are covered by the February 6, 2018, temporary scheduling order, and are currently subject to schedule I controls on a temporary basis, pursuant to 21 U.S.C. 811(h). 83 FR 5188.

1. *Registration.* Any person who handles (manufactures, distributes, reverse distributes, dispenses, imports, exports, engages in research, or conducts instructional activities or chemical analysis with, or possesses), or who desires to handle, fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl is required to be registered with DEA to conduct such activities pursuant to 21 U.S.C. 822, 823, 957, and 958, and in accordance with 21 CFR parts 1301 and 1312.

2. *Security.* Fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl are subject to schedule I security requirements and must be handled and stored pursuant to 21 U.S.C. 821, 823, and in accordance with 21 CFR 1301.71–1301.76. Non-practitioners handling fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl also must comply with the employee screening requirements of 21 CFR 1301.90 -1301.93.

3. *Labeling and Packaging.* All labels, labeling, and packaging for commercial containers of fentanyl carbamate, *ortho*-fluoroacryl fentanyl, *ortho*-fluoro isobutyryl fentanyl, and *para*-fluoro furanyl fentanyl must be in compliance with 21 U.S.C. 825 and 958(e), and be in accordance with 21 CFR part 1302.

4. *Quota.* Only registered manufacturers are permitted to manufacture fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl in accordance with a quota assigned pursuant to 21 U.S.C. 826 and in accordance with 21 CFR part 1303.

5. *Inventory.* Any person registered with DEA to handle fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl must have an initial inventory of all stocks of controlled substances (including these substances) on hand on the date the registrant first engages in the handling of

controlled substances pursuant to 21 U.S.C. 827 and 958, and in accordance with 21 CFR 1304.03, 1304.04, and 1304.11.

After the initial inventory, every DEA registrant must take a new inventory of all stocks of controlled substances (including fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl) on hand every two years pursuant to 21 U.S.C. 827 and 958, and in accordance with 21 CFR 1304.03, 1304.04, and 1304.11.

6. *Records and Reports.* Every DEA registrant is required to maintain records and submit reports with respect to fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl, pursuant to 21 U.S.C. 827 and 958(e), and in accordance with 21 CFR 1301.74(b) and (c) and parts 1304, 1312, and 1317.

7. *Order Forms.* Every DEA registrant who distributes fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl is required to comply with the order form requirements, pursuant to 21 U.S.C. 828 and 21 CFR part 1305.

8. *Importation and Exportation.* All importation and exportation of fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl must be in compliance with 21 U.S.C. 952, 953, 957, and 958, and in accordance with 21 CFR part 1312.

9. *Liability.* Any activity involving fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl not authorized by, or in violation of, the CSA or its implementing regulations is unlawful, and could subject the person to administrative, civil, and/or criminal sanctions.

## **Regulatory Analyses**

*Executive Orders 12866 (Regulatory Planning and Review) and 13563 (Improving*

*Regulation and Regulatory Review)*

In accordance with 21 U.S.C. 811(a), this proposed scheduling action is subject to formal rulemaking procedures done “on the record after opportunity for a hearing,” which are conducted pursuant to the provisions of 5 U.S.C. 556 and 557. The CSA sets forth the criteria for scheduling a drug or other substance. Such actions are exempt from review by the Office of Management and Budget (OMB) pursuant to section 3(d)(1) of Executive Order (E.O.) 12866 and the principles reaffirmed in E.O. 13563.

*Executive Order 12988, Civil Justice Reform*

This proposed regulation meets the applicable standards set forth in sections 3(a) and 3(b)(2) of E.O. 12988 to eliminate drafting errors and ambiguity, minimize litigation, provide a clear legal standard for affected conduct, and promote simplification and burden reduction.

*Executive Order 13132, Federalism*

This proposed rulemaking does not have federalism implications warranting the application of E.O. 13132. The proposed rule does not have substantial direct effects on the States, on the relationship between the National Government and the States, or the distribution of power and responsibilities among the various levels of government.

*Executive Order 13175, Consultation and Coordination with Indian Tribal Governments*

This proposed rule does not have tribal implications warranting the application of E.O. 13175. It does not have substantial direct effects on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

*Regulatory Flexibility Act*

The Acting Administrator, in accordance with the Regulatory Flexibility Act, 5 U.S.C. 601–602, has reviewed this proposed rule and by approving it, certifies that it will not have a significant economic impact on a substantial number of small entities. On

February 6, 2018, DEA published an order to temporarily place fentanyl-related substances, as defined in the order, in schedule I of the CSA pursuant to the temporary scheduling provisions of 21 U.S.C. 811(h). DEA estimates that all entities handling or planning to handle fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl have already established and implemented the systems and processes required to handle these substances which meet the definition of fentanyl-related substances.

There are currently 90 unique registrations authorized to specifically handle the fentanyl-related substances as a class, which include fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl, as well as a number of registered analytical labs that are authorized to handle schedule I controlled substances generally. Some of these entities are likely to be large entities. However, since DEA does not have information of registrant size and the majority of DEA registrants are small entities or are employed by small entities, DEA estimates a maximum of 79 entities are small entities. Therefore, DEA conservatively estimates as many as 79 small entities are affected by this proposed rule.

A review of the 90 registrations indicates that all entities that currently handle fentanyl-related substances, including fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl, also handle other schedule I controlled substances, and have established and implemented (or maintain) the systems and processes required to handle fentanyl carbamate, *ortho* fluoroacryl fentanyl, *ortho*-fluoroisobutyryl fentanyl, and *para*-fluoro furanyl fentanyl. Therefore, DEA anticipates that this proposed rule will impose minimal or no economic impact on any affected entities; and thus, will not have a significant economic impact on any of the 79 affected small entities. Therefore, DEA has concluded that this proposed rule will not have a significant effect economic impact on a substantial number of small entities.

*Unfunded Mandates Reform Act of 1995*

In accordance with the Unfunded Mandates Reform Act (UMRA) of 1995, 2 U.S.C. 1501 *et seq.*, DEA has determined and certifies that this action would not result in any Federal mandate that may result “in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more (adjusted annually for inflation) in any 1 year . . . .” Therefore, neither a Small Government Agency Plan nor any other action is required under UMRA of 1995.

*Paperwork Reduction Act of 1995*

This action does not impose a new collection of information under the Paperwork Reduction Act of 1995. 44 U.S.C. 3501–3521. This action would not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

**List of Subjects in 21 CFR Part 1308**

Administrative practice and procedure, Drug traffic control, Reporting and recordkeeping requirements.

For the reasons set out above, DEA proposes to amend 21 CFR part 1308 as follows:

**PART 1308—SCHEDULES OF CONTROLLED SUBSTANCES**

1. The authority citation for 21 CFR part 1308 continues to read as follows:

Authority: 21 U.S.C. 811, 812, 871(b), 956(b), unless otherwise noted.

2. In § 1308.11:

- a. Redesignate paragraphs (b)(70), (71), and (75) as paragraphs (b)(74), (75), and (76), respectively.
- b. Add paragraph (b)(73);

c. Redesignate paragraphs (b)(64) through (69) as paragraphs (b)(67) through (72);

d. Add new paragraph (b)(66);

e. Redesignate paragraphs (b)(61) through (63) as paragraphs (b)(63) through (65);

f. Add new paragraph (b)(62);

g. Redesignate paragraphs (b)(39) through (60) as paragraphs (b)(40) through (61); and

h. Add new paragraph (b)(39).

The additions read as follows:

**§ 1308.11 Schedule I.**

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(b) \* \* \*

(39) Fentanyl carbamate (ethyl (1-phenethylpiperidin-4-yl)(phenyl)carbamate).....9851

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(62) *ortho*-Fluoroacryl fentanyl (*N*-(2-fluorophenyl)-*N*-(1-phenethylpiperidin-4-yl)acrylamide).....9852

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(66) *ortho*-Fluoroisobutyryl fentanyl (*N*-(2-fluorophenyl)-*N*-(1-phenethylpiperidin-4-yl)isobutyramide).....9853

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(73) *para*-Fluoro furanyl fentanyl (*N*-(4-fluorophenyl)-*N*-(1-phenethylpiperidin-4-yl)furan-2-carboxamide).....9854

\* \* \* \* \*

**D. Christopher Evans,**

Acting Administrator.

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