[PUBLISH]

IN THE UNITED STATES COURT OF APPEALS

FOR THE ELEVENTH CIRCUIT

No. 17-10397

D.C. Docket No. 6:16-cr-00024-GAP-GJK-1

UNITED STATES OF AMERICA,

Plaintiff-Appellee,

versus

JASON ALEXANDER PHIFER,

Defendant- Appellant,

Appeal from the United States District Court
for the Middle District of Florida

(September 21, 2018)

Before JORDAN, ROSENBAUM, and DUBINA, Circuit Judges.

ROSENBAUM, Circuit Judge:

There's no easy way around it. We're just going to have to science the heck out of this case.[1] And when we're done with that, we're going to have to law the heck out of it.

Defendant-Appellant Jason Alexander Phifer was convicted of possession with intent to distribute a controlled substance, in violation of 21 U.S.C. § 841(a)(1) and 21 U.S.C. § 841(b)(1)(C). The substance involved was ethylone.

But as it turns out, ethylone constitutes a controlled substance—and Phifer was therefore convicted of an existing crime—only if ethylone is a "positional isomer" of butylone. Phifer says it's not. To support his position, he urges that "positional isomer" means what he characterizes as the scientific term of art. The Drug Enforcement Administration ("DEA") disagrees and contends that its regulatory definition of "positional isomer" governs, and even if it doesn't, ethylone is a positional isomer of butylone under other scientific definitions. If the DEA is right that the regulatory definition necessarily governs, Phifer's conviction stands. But if not, we must set aside Phifer's conviction.

After careful consideration and a crash course in organic chemistry, we conclude that the DEA's regulatory definition of "positional isomer" does not unambiguously apply to the use of that term as it pertains to butylone and ethylone

[1] We paraphrase Matt Damon's character, Mark Watney, from *The Martian* (2015). *See The Martian* Quotes, IMDb, https://www.imdb.com/title/tt3659388/quotes (last visited Sept. 20, 2018). The movie, in turn, was based on the book of the same name by Andy Weir.

in this case. We therefore vacate Phifer's conviction and remand for further proceedings consistent with this opinion.

I.

The Controlled Substances Act, 21 U.S.C. §§ 801-971 ("CSA" or "Act"), established five schedules of controlled substances, which the CSA regulates or prohibits. *Touby v. United States*, 500 U.S. 160, 162 (1991); *see* 21 U.S.C. § 812. The Act assigns to the Attorney General the task of adding substances to the schedules. *Touby*, 500 U.S. at 162; 21 U.S.C. § 811(a). But before the Attorney General may do so, he or she must follow certain procedures, including engaging in notice-and-comment rule-making, that typically require six to twelve months to complete. *Touby*, 500 U.S. at 163; *see* 21 U.S.C. §§ 811(a)-(c), 877.

Because of that time lag, by the time a specific chemical formulation of a given drug was scheduled, people were able to design and sell drugs that behaved similarly to that substance but differed slightly in chemical composition, without risk of criminal liability. *Touby*, 500 U.S. at 163. To address this problem, Congress amended the CSA to allow the Attorney General to place a substance on a schedule on a temporary basis when the Attorney General deems it "necessary to avoid an imminent hazard to the public safety." *Id.* (quoting 21 U.S.C. § 811(h)) (quotation marks omitted). Under this process, within thirty days after a new drug

is identified, a new drug can be added to a schedule on a temporary basis. *Id.* at 164.

The Attorney General delegated to the DEA the power to add drugs to the schedules—including the power to schedule controlled substances on a temporary basis. *Id.* (citing 28 C.F.R. § 0.100(b) (1990)). Under this authority, in March of 2014, the DEA Administrator issued an order temporarily designating butylone (1-(1,3-benzodioxol-5-yl)-2-(methylamino)butan-1-one) as a Schedule I controlled substance.[2] 79 Fed. Reg. 12,938-12,943 (Mar. 7, 2014). Substances qualify for Schedule I if they have a "high potential for abuse," "no currently accepted medical use in treatment in the United States," and no "accepted safety for use of the drug or other substance under medical supervision." 21 U.S.C. § 812(b)(1). Butylone is a synthetic cathinone[3] and acts, among other ways, as a hallucinogen. *See* 79 Fed. Reg. 12,938; *Synthetic Cathinones ("Bath Salts")*, Nat'l Inst. on Drug Abuse, https://www.drugabuse.gov/publications/drugfacts/synthetic-cathinones-bath-salts (last visited Sept. 20, 2018).

[2] On March 1, 2017, the DEA added butylone to its permanent Schedule I. 82 Fed. Reg. 12,171-12,177 (Mar. 1, 2017). Because this occurred after the events in Phifer's case, we analyze Phifer's case under the law as it applies to drugs temporarily placed on the schedules.

[3] Cathinone is a substance found in the khat plant. *Synthetic Cathinones ("Bath Salts")*, Nat'l Inst. on Drug Abuse, https://www.drugabuse.gov/publications/drugfacts/synthetic-cathinones-bath-salts (last visited Sept. 20, 2018). Naturally occurring, it has mild stimulant effects. *Id.* Synthetic cathinones, also known as "bath salts," are human-made versions of the natural product, and they can be much stronger and more dangerous. *Id.*

The list of drugs on Schedule I appears at 21 C.F.R. § 1308.11.[4] Subsections (b) through (g) of this regulation identify substances placed permanently on Schedule I. *See* 21 C.F.R. § 1308.11(b)-(g). Among these substances permanently listed, certain hallucinogens are set forth at subsection (d). Meanwhile, substances temporarily listed—which may include all types of drugs, including hallucinogens—are identified at subsection (h). *See* 21 C.F.R. § 1308.11(h). At the time relevant to Phifer's case, butylone, along with "its optical, positional, and geometric isomers, salts and salts of isomers," appeared at 21 C.F.R. § 1308.11(h).

Section 1300.01(b) of Title 21 of the Code of Federal Regulations defines the term "isomer" and provides the sole regulatory definition for the term "positional isomer," as used in Schedule I. *See* 21 C.F.R. § 1300.01(b). The DEA added the definition for "positional isomer" to § 1300.01(b) for the first time by final rule that became effective on January 2, 2008. *See* 72 Fed. Reg. 67,850, 67851-52 (Dec. 3, 2007). Section 1300.01(b) defines "isomer," in relevant part, as "(1) [t]he optical isomer, except as used in § 1308.11(d) . . . of this chapter. As

[4] The original Schedule I may be found at 21 U.S.C. § 812. For purposes of the original Schedule I, 21 U.S.C. § 802(14) defines "isomer," in relevant part, as "the optical isomer, except as used in [21 U.S.C. § 812,] schedule I(c) . . . . As used in [21 U.S.C. § 812,] schedule I(c), the term 'isomer' means any optical, positional, or geometric isomer." The original Schedule I permanently lists certain hallucinogens at subsection (c), but to this day, § 812 does not define "positional isomer." Section 812(c) specifically provides that the initial statutory schedules may be amended by the DEA through the process set forth in 21 U.S.C. § 811 and that they are published in the Code of Federal Regulations at 21 C.F.R. Part 1308. 21 U.S.C. § 812(c) n.1.

used in § 1308.11(d) of this chapter, the term 'isomer' means any optical, positional, or geometric isomer." *Id*. The definition of "isomer" then goes on in subsection (2) to define the term "positional isomer," a definition we will discuss in a moment.

But first, we note the DEA's reasons for adding a definition of only "positional isomer" but not definitions for other types of isomers: "The terms 'optical isomer' and 'geometric isomer' are specifically defined and well understood scientific terms, and it is easy to determine whether one substance is an optical or geometric isomer of another." 72 Fed. Reg. at 67,850. In contrast, the DEA acknowledged, "[t]he term 'positional isomer" . . . is not universally defined, and, therefore, is subject to scientific interpretation." *Id.* For this reason, the DEA established its own definition of the term for purposes of the CSA. *Id.*

To better understand the issue in this case, we must delve into the science behind the DEA's definition. Isomers are "[m]olecules that share the same chemical formula but have their atoms connected differently, or arranged differently in space." *Hydrocarbon structures and isomers*, Khan Academy, https://www.khanacademy.org/science/biology/properties-of-carbon/hydrocarbon-structures-and-functional-groups/a/hydrocarbon-structures-and-isomers (last visited Sept. 20, 2018). The way that the atoms are arranged or connected determines the type of isomers the molecules form. *See id.*

Two fundamental types of isomers exist: stereoisomers and constitutional isomers, which are also known as structural isomers. *Isomers*, Khan Academy, https://www.khanacademy.org/science/biology/properties-of-carbon/hydrocarbon-structures-and-functional-groups/v/isomers (last visited Sept. 20, 2018). Each isomer type, in turn, has sub-types. Optical and geometric isomers, which are mentioned in the DEA's definition of "isomer," are sub-types of stereoisomers. Positional isomers—also noted in the DEA's definition of "isomer"—are a sub-type of constitutional isomers. We concern ourselves here with only positional isomers.[5]

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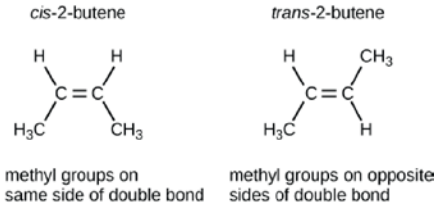
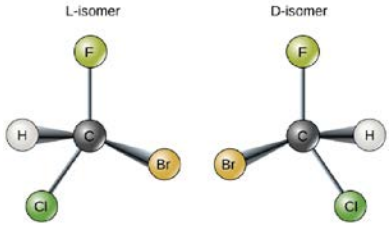
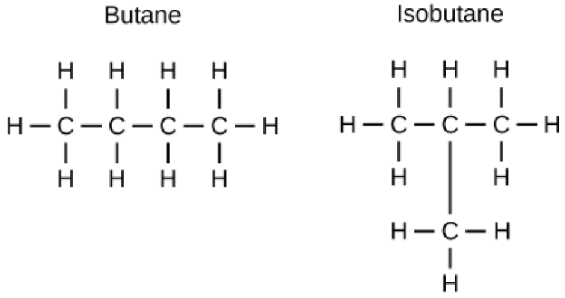
[5] For those who must know more, the other sub-types of isomers mentioned in § 1300.01—optical isomers and geometric isomers—are kinds of stereoisomers, meaning that they share the same bonding, in addition to sharing the same constituent atoms. *Isomer*, Khan Academy, https://www.khanacademy.org/science/biology/properties-of-carbon/hydrocarbon-structures-and-functional-groups/v/isomers, at 3:55-4:21. Geometric isomers include *cis-trans* isomers. Unlike with structural isomers, the atoms of geometric isomers are connected in the same order, but the configuration of atoms around their bonds differs:



Hydrocarbon structures and isomers, https://www.khanacademy.org/science/biology/properties-of-carbon/hydrocarbon-structures-and-functional-groups/a/hydrocarbon-structures-and-isomers (last visited Sept. 20, 2018) (citation omitted). As for optical isomers, they are also known as enantiomers. Optical isomers have the same chemical structure but their three-dimensional placement of atoms differs. Optical isomers are mirror images of one another and cannot be superimposed:



Unlike in stereoisomers, the atoms in constitutional isomers differ in how they are connected. *See Bond-line Structures*, Khan Academy, https://www.khanacademy.org/science/organic-chemistry/gen-chem-review/ bond-line-structures/v/structural-constitutional-isomers-new, at 2:45-2:59 (last visited Sept. 20, 2018). So although constitutional isomers share the same constituent atoms in the same numbers, those atoms are bonded together in different orders. *See Hydrocarbon structures and isomers*, Khan Academy, https://www.khanacademy.org/science/ biology/properties-of-carbon/hydrocarbon-structures-and-functional-groups/a/hydrocarbon-structures-and-isomers (last visited Sept. 20, 2018). The diagram below shows a basic example of a constitutional isomer:



Hydrocarbon structures and isomers, https://www.khanacademy.org/science/biology/properties-of-carbon/hydrocarbon-structures-and-functional-groups/a/hydrocarbon-structures-and-isomers (last visited Sept. 20, 2018). As this illustration demonstrates, the four carbon atoms in

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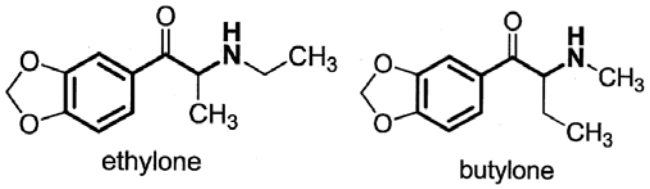
See id. (citation omitted).

butane are connected to each other in a chain (so no carbon atom is bonded to more than two other carbon atoms), whereas one of the four carbon atoms in isobutane has three bonds to other carbon atoms. Similarly, while only two carbon atoms in butane are each bonded to three hydrogen atoms, in isobutane, three carbon atoms are each bonded to three hydrogen atoms, and one carbon atom is bonded to a single hydrogen atom. As a result, although both of these molecules share the same chemical formula (C_4H_{10}), they are different substances.

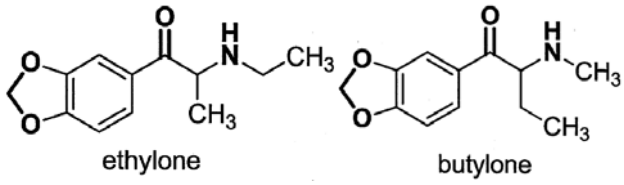
As we have noted, a positional isomer is a type of constitutional isomer. In relevant part, the DEA has defined the term "positional isomer" in 21 C.F.R. § 1300.01(b) to mean "any substance possessing the same molecular formula and core structure and having the same functional group(s) and/or substituent(s) as those found in the respective Schedule I hallucinogen, attached at any position(s) on the core structure . . . ." As the government and Phifer agree, butylone and ethylone are positional isomers of each other under this definition.

For starters, butylone and ethylone both have the same molecular formula—$C_{12}H_{15}NO_3$. Second, they share the same core structure—phenethylamine—as represented by the bold lines[6]:

[6] Not all carbon and hydrogen atoms are expressly identified in diagrams of more complex molecules such as ethylone or butylone. *See Understanding Skeletal Formulae*, Cambridge Chemistry Challenge, http://www.c3l6.org/files/C3L6_Understanding_Skeletal_Formulae.pdf (last visited Sept. 20, 2018). Rather, they are understood to be there, based on the bonding properties of carbon and hydrogen. *See id.*



And third, butylone and ethylone have the same functional groups[7]—amine, ketone, and ether—as indicated by the bold lines:



II.

With this information under our belts, we review the events that resulted in this appeal.

Phifer was indicted for, on May 20, 2015, possessing with intent to distribute "a substance and mixture containing a detectable amount of a positional isomer of [b]utylone, also known as [e]thylone . . . ." He pled not guilty and went to trial.

At trial, Phifer did not dispute that he possessed ethylone. Rather, his entire defense rested on the contention that, at the time of his arrest, ethylone was not a controlled substance under the CSA because it was not a "positional isomer" of

[7] A functional group is a "specific grouping of elements that is characteristic of a class of compounds, and determines some properties and reactions of that class." *Functional Group Names, Properties, and Reactions*, Lumen Boundless Chemistry, https://courses.lumenlearning.com/boundless-chemistry/chapter/functional-group-names-properties-and-reactions/ (last visited Sept. 20, 2018).

butylone as the term "positional isomer" is used in 21 C.F.R. § 1308.11(h). Specifically, Phifer contended that the DEA's definition of "positional isomer" as set forth at 21 C.F.R. § 1300.01(b) does not govern the meaning of the term "positional isomer" in § 1308.11(h)—which identifies only temporarily scheduled substances—because, by its language, the DEA's definition applies to only those substances listed at § 1308.11(d)—which are permanently scheduled hallucinogens. And since, in Phifer's view, the DEA supplied no definition for the term "positional isomer" as it appears in § 1308.11(h) (temporarily scheduled drugs), Phifer argued at trial that the "literal definition" of "positional isomer" applied to that term. According to Phifer, the "literal definition" of the term is the "scientific . . . meaning that is known commonly in the science world, what is taught to the chemists." And, Phifer contended, under the common science definition of "positional isomer," ethylone is not a positional isomer of butylone.

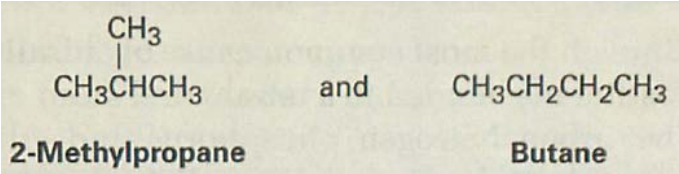
To testify to this "literal definition," Phifer presented as an expert witness Dr. Gregory Dudley, Ph.D.[8] During his testimony, Dr. Dudley relied as an exhibit on the textbook called *Organic Chemistry*,[9] the textbook used to teach organic chemistry at the university where Dr. Dudley was tenured, and according to Dr. Dudley, a commonly used textbook. A page of the textbook explained, "Among

[8] At the time of trial, Dr. Dudley served as the Eberly Family Distinguished Professor and department chair at the Department of Chemistry at West Virginia University. The government stipulated that he was an expert in organic chemistry.

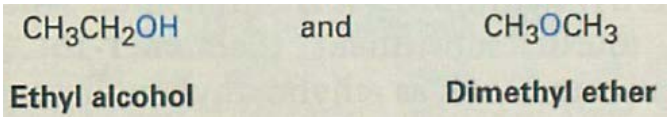
[9] John McMurry, *Organic Chemistry* (Cengage Learning 9th ed. 2015).

the kinds of constitutional isomers we've seen are skeletal, functional, and positional isomers."

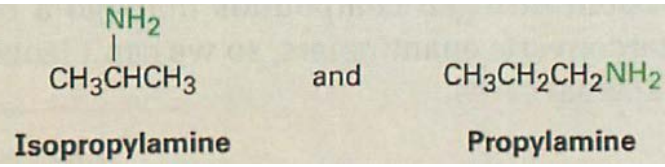
Dr. Dudley testified that skeletal isomers are isomers with different carbon skeletons. As an example of skeletal isomers, Dr. Dudley showed the jury the illustration below:



Def. Ex. 1 (taken from McMurry, *supra*). He further explained that functional isomers are isomers that have different functional groups. So, for example, though ethyl alcohol and dimethyl ether both have the same number of carbon, hydrogen, and oxygen atoms in their composition, those atoms are arranged into different functional groups, like so:

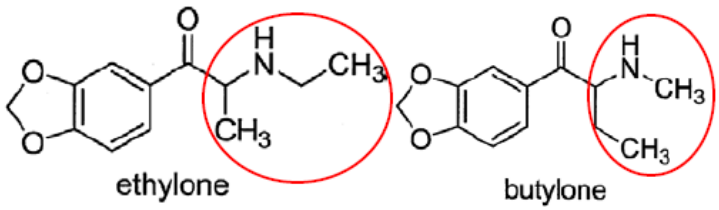


Id. And finally, Dr. Dudley stated that positional isomers have the same carbon skeleton (unlike skeletal isomers) and the same functional groups (unlike functional isomers) but that the functional group is attached to the carbon skeleton at a different position (the "McMurry definition"). So, for example, the functional groups in the skeletal isomers isopropylamine and propylamine are attached like so:



Id.

Under the McMurry definition of "positional isomer," then, butylone and ethylone are not positional isomers because they do not have the same carbon skeletons, as diagramed here:



Rather, butylone and ethylone are skeletal isomers.

Whether isomers are positional or skeletal under the McMurry and DEA definitions differs because the DEA definition of "positional isomer" does not require two different substances to have the same carbon skeleton; in essence, it allows at least some skeletal isomers (under the McMurry definition) to count as positional isomers.

Armed with this testimony, Phifer urged the district court to define "positional isomer" in the jury instructions, using the McMurry definition: a positional isomer is a constitutional isomer that has the same carbon skeleton and the same functional group but differ[s] from another in the location of the functional groups or in the carbon chain." The district court denied Phifer's

request. Instead, it used the DEA definition of "positional isomer" in the jury instructions. For its part, the government proffered that it could call its expert witness back on rebuttal to testify that the DEA definition is consistent with another accepted scientific definition, but the district court declined to hear the rebuttal testimony in light of its decision to instruct the jury on the DEA definition.

The jury returned a verdict of guilty.

III.

Now, for the law.

A.

This case requires us to determine the definition of "positional isomer" as used in 21 C.F.R. § 1308.11(h).[10] We begin by considering the regulatory language. *See Christensen v. Harris Cty.*, 529 U.S. 576, 588 (2000). For if it clearly and unambiguously answers the precise question at issue, that is the end of the matter. *See id.*

Here, the precise question we must resolve concerns whether the definition of "positional isomer" in 21 C.F.R. § 1300.01(b) encompasses the term "positional

[10] Phifer wisely does not challenge the DEA's authority to add substances to the controlled-drug schedules or the DEA's addition of butylone and, among other isomers, its "positional isomers" to Schedule I. Nor does he take issue with the DEA's authority to define by rule-making what it means by the term "positional isomer." Congress distinctly delegated to the Executive its power to perform these functions, and the Supreme Court has previously upheld the DEA's authority to engage in these types of activities. *See Touby*, 500 U.S. 160. Phifer similarly does not assert that the DEA did not follow the required procedures in promulgating the regulations at issue.

isomer" as used at 21 C.F.R. § 1308.11(h). As we have noted, the sole definition for the term "positional isomer" specified in the DEA's regulations is the following:

> As used in parts 1301 through 1308 . . . of this chapter, the following terms shall have the meanings specified:
>
> . . .
>
> As used in § 1308.11(d) of this chapter, the term "positional isomer" means any substance possessing the same molecular formula and core structure and having the same functional group(s) and/or substituent(s) as those found in the respective Schedule I hallucinogen, attached at any position(s) on the core structure, but in such manner that no new chemical functionalities are created and no existing chemical functionalities are destroyed relative to the respective Schedule I hallucinogen. . . .

21 C.F.R. § 1300.01(b).

The government and Phifer each assert that this definition is unambiguous. But of course, they claim it unambiguously means opposite things: the government says the definition clearly covers the term "positional isomer" as used in § 1308.11(h), while Phifer argues it unambiguously excludes that term as used in §1308.11(h).

We conclude that neither is correct; the regulatory language is ambiguous with respect to the precise question we must answer.

On the one hand, the regulation provides the only definition of "positional isomer" in the DEA's CSA regulations, and the prefatory language of section (b),

which applies to all definitions listed in that regulation, purports to render all definitions listed applicable to "part[] 1308," of which § 1308.11(h) is certainly a part. This language suggests that the definition covers use of the term "positional isomer" as it appears in § 1308.11(h).

But on the other hand, the precise definition of "positional isomer" appears, by its use of the phrase "[a]s used in § 1308.11(d)," to limit the definition of that specific term to uses of it in § 1308.11(d). And, of course, § 1308.11(h) is not a part of § 1308.11(d).

Nevertheless, the definition does not say "as used *only* in § 1308.11(d)." So the prefatory phrase could be read as mere surplusage. But the more natural reading of the definition suggests that the definition does not apply to § 1308.11(h).

In short, the language of the regulation is fairly susceptible of being read to answer our precise question—whether the definition of "positional isomer" found in § 1300.01(b) governs the meaning of that term as used in § 1308.11(h)—both affirmatively and negatively. The regulation is therefore ambiguous on the exact issue we must resolve.

B.

So in the alternative, the government contends we should defer to the DEA's interpretation of its own regulations to define the term "positional isomer" that

appears in § 1308.11(h) as it is defined § 1300.01(b). In support of this position, the government relies on so-called *Auer* deference. *See Auer v. Robbins*, 519 U.S. 452, 461 (1997). *Auer* deference provides that when a regulation is ambiguous, we defer to the promulgating agency's interpretation of that regulation, unless its construction is "plainly erroneous or inconsistent with the regulation."[11] *See Auer*, 519 U.S. at 461 (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 359 (1989) (quoting *Seminole Rock*, 325 U.S. at 414)) (internal quotation marks omitted). As long as the agency's interpretation of its own regulation "reflect[s] the agency's fair and considered judgment on the matter in question," *Auer*, 519 U.S. at 462, *Auer* requires deference to it—even if the agency's interpretation appears for the first time in a legal brief in the very litigation at issue. *See id.* at 462-63; *Chase Bank USA, N.A. v. McCoy*, 562 U.S. 195, 208-09 (2011).

Here, the DEA points for its interpretation of the term "positional isomer" to its website at the time of Phifer's arrest. At that time, the DEA maintained a list entitled "Controlled Substances" on its public website. That list identified butylone as a Schedule I controlled substance. And under "OTHER NAMES" for butylone, the list stated, among others, "Positional Isomers: ethylone (bk-MDEA; MDEC) . . .)." *See Controlled Substances*, Drug Enforcement Agency,

[11] *Auer* deference is also sometimes referred to as *Seminole Rock* deference, for the case that originally formulated the standard in 1945. *See Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 413 (1945); *see, e.g., Decker v. Nw. Envtl. Def. Ctr.*, 568 U.S. 597, 616-17 (Scalia, J., concurring in part and dissenting in part).

https://web.archive.org/web/20150415055617/https://www.deadiversion.usdoj.gov/schedules/orangebook/c_cs_alpha.pdf (last visited Sept. 20, 2018).

We agree with the DEA that if *Auer* deference applies here, we must defer to the DEA's interpretation of § 1300.01(b)'s definition of "positional isomer" to govern the meaning of that term in §1308.11(h). The DEA's website clearly identifies ethylone as a "positional isomer" of butylone for purposes of Schedule I. For reasons we have already explained, that interpretation is not "plainly erroneous or inconsistent with the regulation[s]." *See Auer*, 519 U.S. at 461. And we have no "reason to suspect that the [DEA's] interpretation does not reflect the agency's fair and considered judgment on the matter in question." *See Christopher v. SmithKline Beecham Corp.*, 567 U.S. 142, 155 (2012) (citations and internal quotation marks omitted). Nor is the website's interpretation of the term "positional isomer" to apply to drugs listed at §1308.11(h) inconsistent with a prior position the DEA has taken. *See id.* And the fact that it predates this litigation demonstrates that it is not a "*post hoc* rationalization advanced by an agency seeking to defend past agency action against attack." *Id.* (citations and internal quotation marks omitted) (alteration not reflected).

But this is a criminal case. And Phifer argues that *Auer* deference is not appropriate in a criminal prosecution. As Phifer notes, by definition, *Auer*

deference applies only when a regulation is ambiguous. But when a criminal regulation is ambiguous, Phifer contends, the rule of lenity governs instead.

The rule of lenity holds that a law must speak "in language that is clear and definite" if it is to render something a crime. *United States v. Bass*, 404 U.S. 336, 347 (1971) (citation and internal quotation marks omitted). Two principles underlie this rule. First, "a fair warning should be given to the world in language that the common world will understand, of what the law intends to do if a certain line is passed. To make the warning fair, so fair as possible the line should be clear." *Id.* at 348 (citation and internal quotation marks omitted). And second, the separation-of-powers doctrine requires legislatures, not courts, to define crimes. *See id.* Under the rule of lenity, when a criminal law is ambiguous, we resolve doubts in favor of the defendant. *Id.*

The government responds that *Auer* deference essentially trumps the rule of lenity in criminal cases. In support of this position, the government relies on *Ehlert v. United States*, 402 U.S. 99 (1971). *Ehlert* is a criminal case where the Supreme Court had to resolve the meaning of an ambiguous regulation to determine whether Ehlert's criminal conviction could stand. *See id.* at 104-05. Under one interpretation, Ehlert committed a crime, but under the other, he did not. *See id.* The Supreme Court applied what has since become known as *Auer* deference to defer to the agency's reasonable construction of its own regulation in

upholding Ehlert's conviction. *Id.* at 105 (citing, among other cases, *Seminole Rock*, 325 U.S. at 413-14).

Significantly, though, in *Ehlert*, the Court considered only the discrete question of whether the defendant's or the agency's interpretation should apply. Neither party even raised the rule of lenity, let alone suggested it might overcome *Auer* deference. As a result, *Ehlert* did not preclude later courts from concluding that the rule of lenity renders *Auer* deference inapplicable in criminal cases. *See Webster v. Fall*, 266 U.S. 507, 511 (1925) ("Questions which merely lurk in the record, neither brought to the attention of the court nor ruled upon, are not to be considered as having been so decided as to constitute precedents.").

And four years later, our predecessor Court effectively reached that very conclusion. In *Diamond Roofing Co., Inc. v. Occupational Safety & Health Review Commission*, 528 F.2d 645, 649 (5th Cir. 1976), the Court expressly held, "If a violation of a regulation subjects private parties to criminal or civil sanctions, a regulation cannot be construed to mean what an agency intended but did not adequately express." Rather, the regulatory agency "has the responsibility to state with ascertainable certainty what is meant by the standards [it] has promulgated."[12] *Id.*

[12] The former Fifth Circuit relied in part on *M. Kraus & Brothers, Inc. v. United States*, 327 U.S. 614 (1946), for its holding. Like *Ehlert*, *Kraus* is a criminal case. In it, the defendants were indicted for violating a price-control regulation. *Id.* at 616. Because the regulation was

The former Fifth Circuit gave two reasons for its conclusion. First, the public is entitled to "fair warning" of prohibited conduct if it can be penalized for engaging in such behavior. *Id.* And second, the law "must provide a reasonably clear standard of culpability to circumscribe the discretion of the enforcing authority and its agents"—in other words, to maintain separation of powers between the legislature (the executive serving as the legislature's agent) and the executive (serving as the executive). *Id*.

If these reasons sound familiar, that's because, as we have noted, they underlie the rule of lenity. So though the Court did not mention the rule of lenity by name, it effectively invoked the doctrine to defeat *Auer* deference whenever a defendant faces civil or criminal penalties. *See United States v. Moss*, 872 F.3d 304, 308, 314 (5th Cir. 2017) (reaffirming *Diamond Roofing*'s holding that *Auer* deference is precluded in criminal cases).

We are bound by *Diamond Roofing*. *See Bonner v. City of Prichard*, 661 F.2d 1206 (11th Cir. 1981) (en banc) (decisions of the Fifth Circuit issued before the close of business on September 30, 1981, are binding precedent in the Eleventh

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ambiguous on the precise question at issue, the administering agency urged the Supreme Court to defer to its consistently maintained interpretation of the regulation. *Id.* at 623 & n.6. The Supreme Court declined. It explained that it did "not believe that, under the strict rule of construction [applicable to statutory regulations that detail crimes], such an interpretation of [the regulation] [was] dictated by its plain language." *Id.* at 624. And "[n]ot even the [agency's] interpretations of [its] own regulations can cure an omission or add certainty and definiteness to otherwise vague language." *Id.* at 622. Interestingly, *Ehlert* does not mention *Kraus* at all.

Circuit). For that reason, we hold that *Auer* deference does not apply in criminal cases, and instead, we must look solely to the language of the regulatory provision at issue to determine whether it unambiguously prohibits the act charged.

C.

When we consider the regulations at issue here, we cannot ascertain on this record whether, at the time of Phifer's actions, the language of the regulations unambiguously prohibited possession with intent to distribute ethylone. We know that § 1300.01(b)'s definition of "positional isomer" does not govern the meaning of that term in § 1308.11(h).[13] But we do not know what does.

True, the meaning of "positional isomer" in § 1308.11(h) presents a question of law for the court to decide. *See McDermott Int'l, Inc. v. Wilander*, 498 U.S. 337, 356 (1991). But the court must ascertain the meaning of this technical term by looking to the science in which the term is used. *See Corning Glass Works v. Brennan*, 417 U.S. 188, 201 (1974).

[13] Nothing precludes the DEA in the future from going through the rulemaking process to amend § 1300.01(b)'s definition of "positional isomer" to encompass all uses of that term in § 1308.11, including those found at § 1308.11(h). Nor, if the DEA had not already amended its permanent Schedule I to add butylone and its positional isomers to § 1308.11(d), would anything have prevented it from engaging in the roughly 30-day process to temporarily add ethylone to Schedule I. The problem here, though, is that it did neither of those things as of the time of Phifer's arrest. *See Matter of Metro-East Mfg. Co.*, 655 F.2d 805, 811 (7th Cir. 1981) ("It would impose no hardship on the Secretary to amend the rules to give 'fair warning' of the types of investigation deemed 'reasonable.'").

And to do that, the district court must conduct an evidentiary hearing[14] and determine the definition or definitions of "positional isomer" that are generally accepted within the scientific community.[15] At this evidentiary hearing, essentially a modified *Daubert* hearing,[16] the district court must assess the reliability of any evidence offered by the parties, considering to the extent they are reasonable measures of reliability in this context, the specific "reliability" factors mentioned in *Daubert*, 509 U.S. at 593-94, as well as any other relevant factors, *see Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 141 (1999) ("the test of reliability is 'flexible'" (quoting *Daubert*, 509 U.S. 579)). It must also consider the qualifications of any witness presenting evidence. After evaluating all evidence offered, the district court must determine by a preponderance of the evidence what definition or definitions of "positional isomer" are generally accepted within the scientific community.[17] *See Allison v. McGhan Med. Corp.*, 184 F.3d 1300, 1306

[14] If the parties are amenable, the district court can forego the evidentiary hearing and instead accept stipulations of definitions of "positional isomer" that the parties agree are generally accepted in the scientific community.

[15] This does not violate *Alleyne v. United States*, 570 U.S. 99 (2013). "Positional isomer" is merely a definition of a term in a regulation, and it is the duty of the courts to ascertain the definitions of words as they are used in the law. *See McDermott*, 498 U.S. at 356. Plus, as we explain, the district court may not choose what it deems to be the best definition; instead, it simply fulfills a gatekeeping function in identifying all definitions of the term that are generally accepted within the scientific community.

[16] *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993), and its progeny set forth the district court's responsibilities in conducting an evidentiary hearing concerning the admissibility of expert testimony under Rule 702, Fed. R. Evid.

[17] Because the district court did not pass on whether the McMurry definition is generally accepted in the scientific community and the government did not have the opportunity to object to the McMurry definition under the framework set forth in this opinion, should Phifer wish to

(11th Cir. 1999) (identifying preponderance of the evidence as the standard of admissibility in a *Daubert* hearing).

The court may not choose among multiple definitions that are generally accepted within the scientific community. It must credit all definitions of "positional isomer" that the parties show to be generally accepted within the scientific community. Then, during the criminal trial, in the jury instructions, the district court must define "positional isomer" in all ways that it has found are generally accepted within the scientific community. It is for the jury to decide whether, as a matter of fact, ethylone satisfies all of the generally accepted definitions of a "positional isomer" of butylone, on which the district court instructs it. If the jury concludes that it does not meet at least one such definition, the rule of lenity requires it to return a verdict of not guilty. But if the jury finds that ethylone qualifies as a "positional isomer" of butylone under all definitions of that term that the district court provides to it, the jury should return a verdict of guilty.

D.

Finally, we reject Phifer's claim that retrying him would violate double jeopardy. The Double Jeopardy Clause of the Fifth Amendment provides, "[N]or

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rest on the McMurry definition, he should either re-present the evidence or obtain the government's stipulation that the McMurry definition is generally accepted within the scientific community.

shall any person be subject for the same offense to be twice put in jeopardy of life or limb." U.S. Const. amend. V. But "[i]t has long been settled . . . that the Double Jeopardy Clause's general prohibition against successive prosecutions does not prevent the government from retrying a defendant who succeeds in getting his first conviction set aside, through direct appeal . . . , because of some error in the proceedings leading to conviction." *Lockhart v. Nelson*, 488 U.S. 33, 38 (1988); *see also Delgado v. Fla. Dep't of Corr.*, 659 F.3d 1311, 1324 (11th Cir. 2011) (citing and quoting *Lockhart*). Here, Phifer alleges no prosecutorial misconduct, and we can find no other reason why the Double Jeopardy Clause would preclude retrial.

IV.

For these reasons, we vacate Phifer's conviction and remand for further proceedings consistent with this opinion.

REVERSED AND REMANDED.

JORDAN, Circuit Judge, concurring:

I concur in and join Judge Rosenbaum's opinion for the court. Although the task for the district court on remand is an unusual one, I cannot think of a better alternative given the circumstances. *Cf. United States v. Kelly*, 2016 WL 8732182, *5 (D. Nev. 2016) ("The question of whether ethylone is an isomer of butylone—specifically, a positional isomer—is a question for the jury."), *aff'd*, 874 F.3d 1037 (9th Cir. 2017).[1]

As the court correctly explains, the DEA has failed to define the term "positional isomer" for the temporary listings in 21 C.F.R. § 1308.11(h). The only regulatory definition of "positional isomer" is found in 21 C.F.R. 1300.01(b)(21)(ii), but that definition, given its qualifying language—"[a]s used in § 1308.11(d) of this chapter"—does not include § 1308.11(h). *See Burgess v. United States*, 553 U.S. 124, 130 (2008) ("As a rule [a] definition which declares what a term 'means' . . . excludes any meaning that is not stated.") (citation and internal quotation marks omitted). In my view, this definitional void may present a

[1] *Kelly* is the only reported case which involves a criminal charge based on ethylone being a positional isomer of butylone. But *Kelly* is of little help here because the defendant in that case, who pled guilty, did not contest that ethylone is a positional isomer of butylone. *See Kelly*, 874 F.3d at 1045.

vagueness problem even if, as the district court concluded, it was the result of "an unintentional drafting omission." D.E. 65 at 3.[2]

When a term is not defined in a statute, the general rule is that "legislative purpose is expressed by the ordinary meaning of the words used." *Russello v. United States*, 464 U.S. 16, 21 (1983). And when the undefined term is a term of art, the presumption is that "Congress intended it to have its established meaning." *McDermott Int'l, Inc. v. Wilander*, 498 U.S. 337, 342 (1991). So far so good. But when the undefined term of art does not have a settled meaning, we cannot use the *McDermott* presumption, as the Supreme Court told us in *De Pierre v. United States*, 564 U.S. 70, 79 n.8 (2001) (explaining that *McDermott* does not apply "when there is no 'settled meaning'—scientific or otherwise").

An "isomer" is a "compound[ ] with the same chemical formula [as another substance] but different structures." D.E. 98 at 50. *See also* The American Heritage Dictionary of the English Language 928 (4th ed. 2009) (defining isomer as "[a]ny two or more substances that are composed of the same elements in the same proportions but differ in their properties because of differences in the arrangement of atoms"). On this record, there are at least two possible (and

[2] I am not persuaded by the government's argument that the DEA intended the definition of "positional isomer" in § 1300.21(b)(21)(ii) to apply to the temporary listings in § 1308.11(h). *See* Br. for the United States at 20-23. Even assuming that such an intent was likely, "[p]robability is not a guide which a court, in construing a penal statute, can safely take." *United States v. Wiltberger*, 18 U.S. 76, 105 (1820). The DEA can, of course, fix the problem by enacting a regulation that defines "positional isomer" for purposes of § 1308.11(h).

scientifically accepted) definitions of the term "positional isomer." One is the government's definition, as set forth in § 1300.01(b)(21)(ii), and the other is the one provided by Mr. Phifer's expert. The difference between these two definitions concerns the carbon skeleton of the isomer. The government's definition does not require an identical carbon skeleton for an isomer to be "positional," while Mr. Phifer's definition does. These two definitions, however, do not necessarily constitute the relevant universe. As the court explains in its remand instructions, the district court must instruct the jury on all definitions of "positional isomer" that it finds are generally accepted in the scientific community.

Conceivably, the jury here could be given a handful of definitions for the term "positional isomer." In my own non-exhaustive research, I have found several definitions in the case law and literature, though I cannot confidently say that they are generally accepted, or that the differences in wording are significant in a legal or scientific way. *See Procter & Gamble Co. v. Teva Pharmaceuticals USA, Inc.*, 566 F.3d 989, 995 (Fed. Cir. 2009) (describing positional isomers as "contain[ing] the same atoms arranged in different ways"); 2 Concise Encyclopedia of Science & Technology 1514 (McGraw-Hill 6th ed. 2009) ("Positional isomers . . . have the same functional group but differ in its position along a chain or in a ring."); Dorland's Illustrated Medical Dictionary 965 (32nd ed. 2012) (defining "positional isomerism" as "a type of constitutional isomerism

in which the position occupied by a carbon or atom differs with reference to the same fundamental carbon chain").

Criminal statutes and regulations need to be written in a way that allows a reasonable person to understand what is prohibited. This is not only an expectation of good government, it is a demand of constitutional proportions. *See, e.g.*, *Maynard v. Cartwright*, 486 U.S. 356, 361 (1988); *United States v. Edgar*, 304 F.3d 1320, 1327 (11th Cir. 2002).

If there are a handful of generally accepted definitions of "positional isomer" in the scientific community, there might be an as-applied vagueness problem. In that scenario it would be difficult to see how a reasonable person could have known in 2015 whether ethylone was a "positional isomer" of butylone. That reasonable person would have had to survey the scientific community, figure out which definitions of "positional isomer" were generally accepted, and then try to apply each of those definitions to ethylone. *Cf. United States v. Apex Oil Co., Inc.*, 132 F.3d 1287, 1291 (9th Cir. 1997) (dismissing criminal charge because the word "petroleum" was not defined in the applicable regulation: "In the face of uncertainty as to the meaning of what is forbidden, the rule of lenity requires dismissal of count one of the indictment."). On the other hand, the government points out that, notwithstanding any general vagueness concerns, there is evidence that here Mr. Phifer knew he was engaging in illegal conduct (e.g., by admitting to

law enforcement that the way the ethylone was packaged and imported led him to believe it was illegal). And that, says the government, eliminates any vagueness claim. *See* Br. for the United States at 27 (citing *United States v. Carlson*, 87 F.3d 440, 444 (11th Cir. 1996)). Given that we are remanding for an evidentiary hearing, I do not express any view how any vagueness issue should be resolved.