

**United States Court of Appeals**  
**FOR THE EIGHTH CIRCUIT**

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No. 02-1681

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United States of America,

Appellee,

v.

Thomas William Washam,

Appellant.

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Appeal from the United States  
District Court for the  
District of Minnesota.

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Submitted: October 10, 2002

Filed: December 11, 2002

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Before LOKEN, BEAM and MELLOY, Circuit Judges.

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BEAM, Circuit Judge.

A jury found Thomas William Washam ("Washam") guilty of two counts of distributing a controlled substance analogue of gamma-hydroxybutyric acid (GHB) in violation of 21 U.S.C. §§ 841(a)(1), 813 and 802(32). Washam appeals the judgment and the denial of his motion to dismiss the indictment, claiming a violation of his Fifth Amendment due process rights. Washam argues that the definition of a controlled substance analogue in 21 U.S.C. § 802(32) ("Analogue Statute") denies

him due process because it is unconstitutionally vague as applied to the facts of his conviction. We disagree and affirm the district court.<sup>1</sup>

## **I. BACKGROUND**

In August of 2000, Washam began working for "Nutri-Tech," a nutrition store located in College Station, Texas. While at Nutri-Tech, Washam began using and selling products containing 1,4-Butanediol. Washam researched 1,4-Butanediol in order to ascertain its legality, and he determined that a similar substance, GHB, was illegal and that another similar substance, gamma-butyrolactone (GBL), was an illegal analogue to GHB, but 1,4-Butanediol was not listed as an illegal substance. Through the owner of Nutri-Tech, Washam began importing 1,4-Butanediol from Mexico for sale in the United States for human consumption.

With the help of Kyle Anderson, who was being charged with possession of GBL in an unrelated case, the government set up an undercover purchase of 1,4-Butanediol from Washam. Washam agreed to sell Anderson 1500 four-ounce bottles of 1,4-Butanediol for \$55,000. Washam shipped 540 bottles to Anderson via FedEx, which was received on July 13, 2001. A second shipment of bottles from Washam to Anderson was never located. On July 13, Washam also met Anderson and an undercover officer, Robert Nance, at a hotel in St. Paul, Minnesota. During this meeting, Washam delivered 501 bottles to Anderson and indicated that he knew the substance he was selling was to be used for human consumption, and that it was illegal as such. Officer Nance gave Washam the cash and then placed him under arrest.

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<sup>1</sup>The Honorable Ann D. Montgomery, United States District Judge for the District of Minnesota.

At trial, the central issue was whether 1,4-Butanediol is a controlled substance analogue of GHB, as defined in the Analogue Statute. The government offered the opinions of two experts. Dr. Richard Irwin, a research scientist with the National Institutes of Health, testified that the human body converts 1,4-Butanediol into GHB and that at least two deaths had been attributed to the use of the substance.

Dr. James DeFrancesco, a Drug Enforcement Administration ("DEA") chemist, also testified for the government. He said that 1,4-Butanediol and GHB are both linear compounds containing four carbons and that there is only one difference between the substances on one side of their molecules. He stated that this difference does not preclude a substantially similar chemical structure and that his opinion, and the official opinion of the DEA, was that 1,4-Butanediol was an analogue of GHB under the definition in the Analogue Statute.

Washam also presented two experts. Dr. J. Thomas Ippoliti, a chemistry professor at the University of St. Thomas, testified that the difference between 1,4-Butanediol and GHB was in their respective functional groups. Functional groups allow chemists to differentiate between chemical structures and to determine a chemical's physical properties and reactivity. This difference in functional groups means that the two chemicals are not substantially similar in chemical structure.

Dr. Jordan Holtzman, a physician with a Ph.D. in pharmacology, testified that 1,4-Butanediol metabolizes into GHB through a two-step process in the body. MSG, a food additive, also metabolizes into GHB in the body. Dr. Holtzman stated that GHB and 1,4-Butanediol are very different substances outside of the body. GHB works as a neurotransmitter, while 1,4-Butanediol does not, and GHB is 100 billion times more acidic than 1,4-Butanediol. Dr. Holtzman testified that 1,4-Butanediol and GHB are not substantially similar in chemical structure.

The jury heard all of this expert testimony, was instructed to determine whether 1,4-Butanediol is a controlled substance analogue under the Analogue Statute, determined that it was a controlled substance analogue, and found Washam guilty of distributing a controlled substance analogue. Washam appeals this determination, claiming that the definition of a controlled substance analogue in 21 U.S.C. § 802(32) is void for vagueness because it fails to provide notice of the conduct proscribed and because it lends itself to arbitrary enforcement.

## II. DISCUSSION

We review a constitutional challenge to a federal statute de novo. United States v. Whiting, 165 F.3d 631, 633 (8th Cir. 1999).

The Fifth Amendment guarantees every citizen the right to due process. Stemming from this guarantee is the concept that vague statutes are void. Connally v. Gen. Constr. Co., 269 U.S. 385, 391 (1926). "[A] statute which either forbids or requires the doing of an act in terms so vague that men of common intelligence must necessarily guess at its meaning and differ as to its application, violates the first essential of due process of law." Id. "Void for vagueness simply means that criminal responsibility should not attach where one could not reasonably understand that his contemplated conduct is proscribed." United States v. Nat'l Dairy Prods. Corp., 372 U.S. 29, 32-33 (1963). "[L]aws [must] give the person of ordinary intelligence a reasonable opportunity to know what is prohibited, so that he may act accordingly. Vague laws may trap the innocent by not providing fair warning." Grayned v. City of Rockford, 408 U.S. 104, 108 (1972). "[V]agueness challenges to statutes which do not involve First Amendment freedoms must be examined in the light of the facts of the case at hand." United States v. Mazurie, 419 U.S. 544, 550 (1975).

In determining whether a statute is unconstitutionally vague on the facts at hand, we apply a two-part test. First, the statute must provide adequate notice of the

proscribed conduct. Kolender v. Lawson, 461 U.S. 352, 357 (1983). Second, the statute must not lend itself to arbitrary enforcement. Id. at 358. Washam argues that section 802(32) violates both parts of this test because the statute does not provide adequate notice of proscribed conduct and because it allows for arbitrary enforcement.

**A.**

A penal statute is void if it does not sufficiently define a criminal offense so that ordinary people can understand what conduct is prohibited. Kolender, 461 U.S. at 357. This inquiry looks at what a person of "common intelligence" would "reasonably" understand the statute to proscribe, not what the particular defendant understood the statute to mean. Nat'l Dairy Prods., 372 U.S. at 32-33; Connally, 269 U.S. at 391. The statute in question in this case defines a controlled substance analogue as a substance:

- (i) the chemical structure of which is substantially similar to the chemical structure of a controlled substance in schedule I or II;
- (ii) which has a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the . . . effect on the central nervous system of a controlled substance in schedule I or II; or
- (iii) with respect to a particular person, which such person represents or intends to have a stimulant, depressant, or hallucinogenic effect on the central nervous system that is substantially similar to or greater than the . . . effect on the central nervous system of a controlled substance in schedule I or II.

21 U.S.C. § 802(32)(A).<sup>2</sup>

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<sup>2</sup>While there is some debate as to how this provision is to be read, we agree with the courts who have read the three requirements in the conjunctive. Thus, part

Washam argues that there is no consensus in the scientific community regarding whether 1,4-Butanediol has a "substantially similar" chemical structure to GHB under provision (i) of this definition, and thus the definition is unconstitutionally vague as applied. The government argues that Washam had actual notice that his conduct was illegal and so he cannot claim that the statute is void for vagueness as applied to him. Additionally the government argues that a person of common intelligence has sufficient notice under the statute that 1,4-Butanediol is a controlled substance analogue. We agree with the government.

We think the government's "actual notice" argument has some appeal and is supported by United States v. Saffo, 227 F.3d 1260, 1270 (10th Cir. 2000), cert. denied, 532 U.S. 974 (2001). In Saffo, the defendant challenged a statute as unconstitutionally vague. The court held that the defendant could not sustain the challenge because she concealed her activities and lied to DEA agents, which showed that she had actual knowledge of the illegality of her actions. Id. Thus, the defendant was not in "a situation where she 'could not reasonably understand that [her] contemplated conduct [was] proscribed.'" Id. (quoting Parker v. Levy, 417 U.S. 733, 757 (1974)) (first alteration in original). Similarly, the evidence in the present case shows that Washam knew his conduct was illegal because even though the shipping label said not to ingest, Washam told the buyers how much to ingest, he charged an exorbitant mark-up price on the chemical, and he commented about other chemicals that *were* legal for human consumption.

Additionally, even if we overlook Washam's actual knowledge that his conduct was illegal, we still find that the Analogue Statute is not vague as applied to him because a person of ordinary intelligence would have reasonably known that selling 1,4-Butanediol for human consumption violated the statute. See Grayned, 408 U.S.

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(i) must be satisfied and either part (ii) or part (iii) must also be satisfied. See United States v. Forbes, 806 F. Supp. 232, 235-36 (D. Colo. 1992).

at 108-09. The term "substantially similar," as used in the statute, does not mean "exactly the same." There obviously will be differences in chemical structures between an "analogue" chemical and a schedule I or II chemical. If two chemicals' structures are exactly the same, the chemical in question would no longer be an "analogue," but instead it would be the same chemical as the listed chemical. Thus, some level of difference is acceptable between an analogue's chemical structure and a proscribed chemical's structure.

We have held that all experts need not agree on whether two drugs' chemical structures are "substantially similar" in order to affirm a conviction under the Analogue Statute. United States v. McKinney, 79 F.3d 105, 108 (8th Cir. 1996), vacated on other grounds, 520 U.S. 1226 (1997); but see Forbes, 806 F. Supp. at 237 (application of Analogue Statute to alphaethyltryptamine void for vagueness because government's own witnesses differed as to whether the chemical had a substantially similar structure to a controlled substance). Rather than unanimous expert ratification, we look to whether the statute gave adequate warning, under a specific set of facts, that the defendant's behavior was a criminal offense. McKinney, 79 F.3d at 108.

The difficulty is determining when "some notice" is enough notice. In United States v. Fisher, the Eleventh Circuit determined that defendants had enough notice that GBL is a chemical analogue to GHB. 289 F.3d 1329, 1339 (11th Cir. 2002). In coming to this conclusion, the court found it relevant that GBL was a listed chemical and that Congress had stated that GBL was a chemical analogue to GHB in its proposed rules. Id. at 1336. When Congress commented that GBL was a chemical analogue to GHB, it also mentioned that 1,4-Butanediol was the same sort of analogue.

If taken for human consumption, GBL and other chemicals, including 1,4-butanediol, are swiftly converted into GHB by the body. Abuse of

these and other GHB-like substances is a significant law enforcement and public health problem. GBL and 1,4-butanediol are structurally and pharmacologically similar to GHB and are often substituted for GHB. Under certain circumstances they may satisfy the definition of a controlled substance analogue.

Placement of Gamma-Butyrolactone in List I of the Controlled Substances Act (21 U.S.C. § 802(34)), 65 Fed. Reg. 21645 (April 24, 2000) (codified at 21 C.F.R. § 1310). This piece of explicit notice, in addition to the fact that 1,4-Butanediol turns into GHB in the body and has the same effect as GHB, aids us in concluding that there is sufficient notice that 1,4-Butanediol is a chemical analogue of GHB. See Fisher, 289 F.3d at 1336.

## **B.**

The second part of the statutory due process inquiry is whether the statute lends itself to arbitrary enforcement. Kolender, 461 U.S. at 358. Congress must provide minimal requirements to guide law enforcement in order to prevent police officers, prosecutors, and juries from pursuing their "personal predilections." Id. Indeed, the United States Supreme Court has noted:

It would certainly be dangerous if the legislature could set a net large enough to catch all possible offenders, and leave it to the courts to step inside and say who could be rightfully detained, and who should be set at large. This would, to some extent, substitute the judicial for the legislative department of the government.

United States v. Reese, 92 U.S. 214, 221 (1875).

There is some superficial appeal to Washam's comparison between 1,4-Butanediol and MSG, the common food additive that also becomes GHB in the

human body. But Washam's conclusion that the Analogue Statute lends itself to arbitrary enforcement because it allows for a distinction between the two substances is flawed. The statute does not allow for arbitrary enforcement because the statute itself requires a two-step inquiry before law enforcement may extend its application to a new chemical. The first step in the statute is to determine whether a chemical is substantially similar in chemical structure to a listed chemical. 21 U.S.C. § 802(32)(A)(i). Beyond this inquiry is the requirement that the chemical either has the same effect as the listed chemical on the human body, or it is intended to have such an effect. *Id.* § 802(32)(A)(ii), (iii). Utilizing these two steps, MSG could not be proscribed by the Analogue Statute. While MSG may be substantially similar in physical and chemical structure to GHB, just as is 1,4-Butanediol, MSG does not have similar effects on the human body, nor do food producers intend for MSG to have the same effect as GHB. Thus, MSG would not satisfy the second prong of the statute. To the contrary, 1,4-Butanediol is substantially similar in physical and chemical structure to GHB *and* it has a similar effect on the human body as GHB. This violates the statute. Thus, applying the Analogue Statute to 1,4-Butanediol and not to MSG is not proof of arbitrary enforcement, rather it is proof that the statute is narrowly drawn to proscribe only those chemicals which are dangerous and intended to be used in an illegal manner.

In United States v. Roberts, No. 01CR410, 2002 WL 31014834 (S.D.N.Y. Sept. 9, 2002), cited by Washam, the district court held that the Analogue Statute was unconstitutionally vague as applied to 1,4-Butanediol because it violated both prongs of the void for vagueness test. This decision is incorrect on both points. The court in Roberts held that there was insufficient notice because of the lack of consensus among experts in the field as to whether the two chemicals were substantially similar, that experts could not agree on which methodology to use to determine substantial similarity, that 1,4-Butanediol was not designated a List I chemical and that no warning letters were sent to distributors of 1,4-Butanediol like those sent to distributors of GBL. *Id.* at \*4-\*5. While all of these are factors to be considered,

they do not mandate, either individually or in the aggregate, a finding that there was no adequate notice that 1,4-Butanediol was an analogue of GHB. We have already stated that experts need not agree for there to be a finding that a chemical is an analogue to GHB. McKinney, 79 F.3d at 108. Further, Congress did not state that distributors of analogues must be warned prior to enforcement of the statute. Nor did Congress state or intend that only List I chemicals may be considered analogues.

Additionally, the court in Roberts held that effects on the human body could not be considered in determining whether the chemicals were "substantially similar" under the first part of the statute. Roberts, 2002 WL 31014834 at \*5. We disagree. While the effects on the human body must be similar in order to satisfy the second part of the statute, this does not prevent consideration of the effects on the human body when determining whether the chemical satisfies the "substantially similar" requirement of the first portion of the law. In this regard, we think it is extraordinarily relevant that 1,4-Butanediol transforms into GHB upon ingestion with similar physical results.

The court in Roberts also found that the Analogue Statute, as applied to 1,4-Butanediol, is unconstitutionally vague because it allows for arbitrary enforcement. Id. In coming to this conclusion, the court rested its decision on the fact that several other products, such as Gamma Aminobutyric Acid (GABA) and succinic acid were as similar to GHB as 1,4-Butanediol, differing only in one functional group. Id. The court, however, failed to recognize that this problem was addressed by the Analogue Statute because the statute requires a showing of structural similarity *and* similar effect on the human body (or intent for there to be such an effect). Obviously, GABA, succinic acid, and MSG (cited by Washam for the same proposition) do not have the same dangerous effects on the body that GHB does. Otherwise, the FDA would not have approved the substances for human consumption. Congress does address the problem of these other similar substances in its use of the two-part test. This prevents arbitrary enforcement.

One of Congress' purposes for passing the Analogue Statute was to prohibit innovative drugs that are not yet listed as controlled substances. McKinney, 79 F.3d at 107. However, Congress did not limit the Analogue Statute's application to newly designed drugs. The language of the statute shows that Congress intended to proscribe all drugs that are similar in chemical structure and effect to illegal drugs. We are confident that Congress intended to prohibit use of dangerous substances such as 1,4-Butanediol when it passed the Analogue Statute.

### **III. CONCLUSION**

The Analogue Statute is not void for vagueness as applied to 1,4-Butanediol because Congress provided adequate notice of the proscribed conduct and prevented arbitrary enforcement through the terms of the statute. Therefore, we affirm the district court.

A true copy.

Attest:

CLERK, U.S. COURT OF APPEALS, EIGHTH CIRCUIT.