

FOR PUBLICATION

**UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

UNITED STATES OF AMERICA,	No. 20-10288
<i>Plaintiff-Appellee,</i>	D.C. No.
v.	2:15-cr-00285-
BENJAMIN GALECKI, AKA	APG-EJY-2
Zencense Ben,	OPINION
<i>Defendant-Appellant.</i>	

UNITED STATES OF AMERICA,	No. 20-10296
<i>Plaintiff-Appellee,</i>	D.C. No.
v.	2:15-cr-00285-
CHARLES BURTON RITCHIE, AKA	APG-EJY-1
Burton Ritchie,	
<i>Defendant-Appellant.</i>	

Appeal from the United States District Court
for the District of Nevada
Andrew P. Gordon, District Judge, Presiding

Argued and Submitted December 6, 2021
San Francisco, California

Filed December 27, 2023

Before: Ronald M. Gould and Daniel P. Collins, Circuit
Judges, and Roslyn O. Silver, * District Judge.

Opinion by Judge Collins

SUMMARY**

Criminal Law

The panel affirmed Benjamin Galecki’s and Charles Burton Ritchie’s drug-trafficking and money-laundering convictions in connection with their distribution of “spice,” a synthetic cannabinoid product; reversed their mail and wire fraud convictions; and remanded for further proceedings.

Defendants manufactured and distributed spice through their company, Zencense Incenseworks, LLC. The drug-trafficking charges were based on the premise that, although the particular cannabinoid that Defendants used, XLR-11, had not yet been specifically listed as a prohibited controlled substance under federal law, that cannabinoid was

* The Honorable Roslyn O. Silver, United States District Judge for the District of Arizona, sitting by designation.

** This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

nonetheless treated as a controlled substance because it was an “analogue” of a listed substance.

Defendants contended that all of their convictions should be set aside on the ground that the district court erred in refusing to suppress evidence seized during or as a result of a raid at Zencense’s Nevada warehouse. The panel held that Defendants failed to establish that they have Fourth Amendment standing to challenge the search and that the district court therefore properly denied their motions to suppress.

Defendants argued that the evidence was insufficient to establish the scienter required in a Controlled Substances Act (CSA) prosecution resting on the Controlled Substance Analogue Enforcement Act of 1986 (the Analogue Act). Applying *McFadden v. United States*, 576 U.S. 186 (2015), and considering the record as a whole, the panel concluded that a rational jury could find, beyond a reasonable doubt, that both Defendants had the scienter required for an Analogue Act case.

The panel held that the district court did not abuse its discretion in concluding that its “deliberate ignorance” instruction modeled on this court’s decision in *United States v. Jewell*, 532 F.2d 697 (9th Cir. 1976) (en banc), had a sufficient foundation in the evidence.

The panel rejected Defendants’ as-applied vagueness challenge to the statutory definition of a “controlled substance analogue” in the Analogue Act.

Defendants argued that their due process rights were violated by the district court’s failure to compel the Government to grant use immunity to two potential defense witnesses who would have testified as to the Defendants’

scienter concerning whether XLR-11 was covered by the Analogue Act. The panel held that Defendants failed to make the requisite showing of a direct contradiction in testimony that resulted in a fundamentally unfair distortion of the fact-finding process.

Rejecting Defendants’ contention that the evidence was insufficient to support their convictions for operating a continuing criminal enterprise in violation of the CSA, the panel held that the evidence was sufficient to permit a rational jury to conclude that Defendants acted “in concert” with five or more persons.

The panel held that the evidence at trial was insufficient to prove the mail-fraud and wire-fraud offenses charged in the indictment, and that Defendants were entitled to judgment of acquittal on these counts, because the Government presented no evidence that the specific alleged misrepresentations were materially false to anyone who bought Zencense’s products.

The panel addressed whether the jury’s general verdict on the money laundering offenses—which did not specify on which predicate offenses it relied—may stand. The panel held that any error under *Yates v. United States*, 354 U.S. 298 (1957), in allowing the money laundering convictions to be based on the mail and wire fraud conduct, rather than on the CSA offenses, was harmless beyond a reasonable doubt.

COUNSEL

James Felman (argued) and Brandon K. Breslow (argued) Kynes Markman & Felman PA, Tampa, Florida; J. Lloyd Snook III, Snook & Haughey PC, Charlottesville, Virginia; for Defendants-Appellants.

Elizabeth O. White (argued) and Robert L. Elman, Assistant United States Attorneys, Office of the United States Attorney-Reno, Reno, Nevada; Adam M. Flake and Daniel D. Hollingsworth, Assistant United States Attorneys; Christopher Chiou, Acting United States Attorney, Office of The United States Attorney, Las Vegas, Nevada; for Defendants-Appellants.

OPINION

COLLINS, Circuit Judge:

Defendants Benjamin Galecki and Charles Burton Ritchie were convicted of drug trafficking, mail fraud, wire fraud, and money laundering in connection with their distribution of “spice,” a synthetic cannabinoid product that, when smoked, produces a high. The drug-trafficking charges were based on the premise that, although the particular cannabinoid that Defendants used had not yet been specifically listed as a prohibited controlled substance under federal law, that cannabinoid was nonetheless treated as a controlled substance because it was an “analogue” of a listed substance. On appeal, Defendants raise multiple challenges to their analogue-based drug-trafficking convictions, but we reject these contentions and affirm those convictions. We

likewise affirm their money laundering convictions, but we reverse their mail and wire fraud convictions.

I

A

Defendants Galecki and Ritchie manufactured and distributed spice through their company, Zencense Incenseworks, LLC (“Zencense”), which was formed in Florida in 2010. Although headquartered in Florida, Zencense also manufactured spice at a warehouse that the company leased in Nevada. Zencense was highly successful, and mid-2012, it employed approximately 140 people.

At trial, several former Zencense employees testified concerning the company’s spice operations. For example, Robert Biggerstaff testified that Galecki taught him how to manufacture spice that contained a cannabinoid known alternatively as “XLR-11” or “5F-UR-144.” The “point of adding” the XLR-11, Biggerstaff explained, was to “create a product that would actually get you high.” Rachel Templeman, a sales employee, testified that Zencense customized the product with various flavorings, including blueberry, cherry, vanilla, chocolate, and pineapple.

Although both Templeman and Biggerstaff stated that they knew that end users were ingesting Zencense’s products, the company maintained an official position that its products were simply “potpourri,” which it sold in packets labeled “not for human consumption.” Consistent with this company position, Biggerstaff testified that Zencense staff were instructed not to refer to the various versions of the product as “flavors,” because that could “invoke[] a connotation of being orally ingested.” Rather, staff were expected to use the words “aroma” or “fragrance.”

Biggerstaff stated that, if a Zencense employee did not use the “language of fragrance” or “aroma,” and instead “refer[red] to something involving taste,” that employee “would have been terminated” by Galecki or Ritchie. Templeman agreed that “we weren’t able to call [the options] flavors” and that she instead referred to them as “[a]romas” or “scents.”

However, rather than sell its “potpourri” to home goods stores such as “Bed Bath & Beyond” or to general retailers such as Target or Walmart, Zencense marketed its products primarily to “either smoke shops or alternative adult emporiums” or “independent convenience stores.” Templeman testified that when she referred to “spice or incense or potpourri” on sales calls to such potential retailers, “they knew what you were talking about,” because those names were “standard in the industry.” Asked why Zencense did not market its potpourri to stores like Target or Walmart, Biggerstaff explained that “[w]e didn’t believe they would be a good customer for our product” because they would be expecting “an air freshener,” and “that’s not the product that we were selling.”

To illustrate the stark contrast between Zencense’s products and actual potpourri, the Government introduced testimony from the CEO of a genuine potpourri company, Aromatique. The CEO testified that Aromatique typically sold its conventional potpourri to retailers such as Anthropologie and Macy’s for as much as \$18 per 8-ounce package. Zencense “potpourri,” by contrast, sold to smoke shops and other similar stores for around \$7.50 per *gram*—*i.e.*, more than 90 times the price of ordinary potpourri at

Aromatique.¹ The potpourri options available to shoppers at Aromatique included “Smell of Spring,” “Tarocco & Clove,” and “Valencia Orange.” The Zencense “potpourri” options included “Bizarro,” “Shockwave,” “Headhunter,” “Sonic Boom,” and “DefCon 5 Total Annihilation.”

The Government also introduced Zencense’s written sales script into evidence, and it confirmed the company’s focus on selling to smoke shops while simultaneously maintaining the nominal position that the products were “not for human consumption.” For example, if a potential retailer responded that it did not carry “spice” and was not familiar with it, the script stated that the Zencense salesperson should then explain that spice was “an herbal incense blend that you burn” and then immediately ask, “Do you sell pipes?” If the retailer responded that it did *not* sell pipes, the script stated that “[m]ost likely this will not be a potential customer” and the salesperson should “[e]nd [the] call, mark ‘Not Interested,’ explain in notes, and mark for deletion.” But if the retailer stated that it did sell pipes, then the caller was to immediately respond by saying, “You know how pipes are for tobacco use only? Well, spice is not for human consumption.” An associated note in the script reminded the caller that the company’s “stance” was “always that it is not for human consumption.” But the script also noted that retailers “that are in this business understand that language is very important and will usually not press the issue too much.”

In addition, the Government presented testimony to show that Galecki and Ritchie were aware that customers

¹ A wholesale price of \$18 for an 8-ounce package works out to approximately \$2.25 per ounce. By contrast, a wholesale price of \$7.50 per gram works out to more than \$212 per ounce.

were smoking Zencense products to get high. The owner of a chain of smoke shops who purchased spice from Zencense testified that Ritchie told him that if someone smoked spice, “it would knock you out for a couple of hours on the floor.” And Jayson Lang, who owned a business that sold XLR-11 to Zencense, testified that “[i]t was common knowledge that people were consuming the product” and that Galecki had told him “people liked the 5F-UR-144 [XLR-11] more than” another similar cannabinoid because XLR-11 was “fluorinated,” which “made it stronger.”

In July 2012, employees of an apparel shop that was located next to Zencense’s Nevada warehouse contacted the Las Vegas police about what they considered to be suspicious activities at the warehouse. Ultimately, federal authorities sought and obtained a search warrant, which was executed on July 25, 2012. Numerous items were seized, including substantial quantities of XLR-11.

Notified of the Nevada raid, Ritchie responded the same day by calling a Florida police officer whom he knew from middle school and who in turn referred him to a DEA agent named Claude Cosey. On July 26, Ritchie took Cosey and another DEA employee on a “tour” of the company’s Florida facilities, and he gave them free samples. During the tour, Cosey told Ritchie “[y]ou know people smoke this, correct?” Ritchie responded: “Hey, I sell it as either incense or potpourri Whatever they do with it after that, I don’t know and I don’t want to know.”

Defendants were charged with conducting a continuing criminal enterprise in violation of the Controlled Substances Act (“CSA”), *see* 21 U.S.C. § 848; violations of the CSA relating to alleged drug trafficking; and various financial

crimes including money laundering, mail fraud, and wire fraud.

B

At the time Defendants engaged in the charged conduct, XLR-11 had not yet been listed on the federal schedules of controlled substances governed by the CSA.² Accordingly, the Government’s drug-trafficking charges proceeded on the theory that XLR-11 fell within the CSA’s provisions addressing “analogues” of listed substances. To set the relevant context concerning the Government’s analogue theory, we first review what it means to be an “analogue” under the CSA, and we then summarize the Government’s trial evidence concerning whether XLR-11 was an analogue.

1

The CSA provides for five “schedules” of controlled substances that are regulated under the Act. *See* 21 U.S.C. § 812. The schedules are numbered in decreasing levels of perceived dangerousness, with “Schedule I” listing the most dangerous substances that have no accepted medical use. *See id.* § 812(b)(1), (c). The various schedules, however, are not set in stone: the CSA expressly “authorizes the Attorney General to add or remove substances, or to move a substance from one schedule to another.” *Touby v. United States*, 500 U.S. 160, 162 (1991) (citing 21 U.S.C. § 811(a)). Unsurprisingly, violations of the CSA that involve Schedule I substances “carry the most severe penalties.” *Id.*

The listed-chemical approach of the CSA gave rise to a significant loophole. By taking a substance listed on the federal schedules and making modifications to its chemical

² Effective May 16, 2013, XLR-11 was formally added to Schedule I. *See* 78 Fed. Reg. 28735 (May 16, 2013).

structure, drug designers were able to “develop subtle chemical variations of controlled substances” that were functionally similar to a listed chemical without actually *being* a listed chemical. *Grinspoon v. DEA*, 828 F.2d 881, 891 (1st Cir. 1987) (citation omitted). Congress responded to this problem by passing the Controlled Substance Analogue Enforcement Act of 1986 (“the Analogue Act”). See Pub. L. No. 99-570, title I, subtitle E, 100 Stat. 3207-13–3207-14 (Oct. 27, 1986). The Analogue Act accomplishes this goal through two amendments to the CSA. First, the Analogue Act added a new definition of the term “controlled substance analogue.” 21 U.S.C. § 802(32)(A). Second, the Analogue Act added a new section establishing the substantive rule governing such “controlled substance analogues.” See *id.* § 813. In its current form, the key subsection of that latter provision states: “A controlled substance analogue shall, to the extent intended for human consumption, be treated, for the purposes of any Federal law[,], as a controlled substance in schedule I.” *Id.* § 813(a). Thus, any substance falling within the definition of a controlled substance analogue must be treated, if “intended for human consumption,” as equivalent to the most serious controlled substances with the most severe penalties. *McFadden v. United States*, 576 U.S. 186, 188 (2015) (citations omitted).

Given this draconian rule, the statutory definition of “controlled substance analogue” is obviously crucial. That definition states that, subject to certain limited exceptions:

[T]he term “controlled substance analogue” means 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 stimulant, depressant, or hallucinogenic 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 stimulant, depressant, or hallucinogenic effect on the central nervous system of a controlled substance in schedule I or II.

21 U.S.C. § 802(32)(A).

Although the three components of this definition are written in the disjunctive, most courts have read the statute as requiring proof of *both* (1) component (i) *and* (2) *either* component (ii) or component (iii). *See United States v. Makkar*, 810 F.3d 1139, 1142–43, 1146 (10th Cir. 2015) (concluding that this reading was confirmed by “the plain language of the statute” and also noting the potential vagueness concerns presented by a broader, fully disjunctive reading); *see also United States v. Turcotte*, 405 F.3d 515, 521–22 (7th Cir. 2005); *United States v. Klecker*, 348 F.3d 69, 71 (4th Cir. 2003); *United States v. Hodge*, 321 F.3d 429, 435–39 (3d Cir. 2003); *United States v. Washam*, 312 F.3d

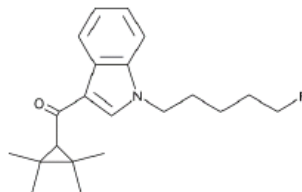
926, 930 n.2 (8th Cir. 2002). With the acquiescence of both sides, that reading was explicitly embodied in the jury instructions that were given at Defendants’ trial, and the Government confirmed at oral argument in this court that it does not contest that construction of the statute for purposes of this case. In view of that concession, “we need not decide in this case whether that interpretation is correct,” and therefore “we assume for the sake of argument that it is.” *McFadden*, 576 U.S. at 194 n.2 (declining to address this very same issue).

2

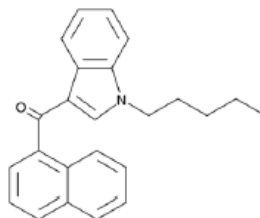
The indictment charged that XLR-11 was an analogue of “JWH-018,” a substance that was added to Schedule I effective March 1, 2011. *See* 76 Fed. Reg. 11075 (Mar. 1, 2011); *see also* 21 C.F.R. § 1308.11(g)(3). At trial, the Government relied on expert testimony to establish that XLR-11 satisfied both elements of the definition of an analogue with respect to JWH-018.

First, Dr. Gregory Endres, an expert in “organic forensic and medicinal chemistry,” testified that XLR-11 had a substantially similar chemical structure to JWH-018. Dr. Endres prepared the following diagram depicting XLR-11 and JWH-018 side-by-side:

Chemical structure of XLR11:



Chemical structure of JWH 018:



Dr. Endres stated that “[t]o make a determination on structural similarity I look at the chemical as a whole.” Dr. Endres explained that XLR-11 and JWH-018 have “exactly the same” “acylindole core,” including the “same atoms” in the “same locations” with the “exact same structure.” In Dr. Endres’s view, the “substitution of a fluorine atom” in the tail part of XLR-11’s structure was not a significant change from JWH-018. Dr. Endres also noted that the “naphthyl group” in JWH-018 was replaced by a “tetramethylcyclopropyl” group in XLR-11. He stated that the naphthyl group is an aromatic that can engage in “pi stacking,” a phenomenon that he described as providing a “weak electrostatic interaction . . . that can contribute to better binding affinity.” However, he stated that he did not view this “as a significant enough change,” because “pi stacking is not required for binding affinity in the cannabinoid receptors.”

Second, Dr. Jordan Trecki, a pharmacological expert, opined that “XLR-11 has a substantially similar

hallucinogenic effect on the central nervous system of that of JWH-018.” Dr. Trecki testified that chemical differences between JWH-018 and XLR-11 “retained and actually intensified the pharmacological effect of the substance.” Substances like XLR-11 “continued to work [as] well [as] or greater than the original JWH substance,” and the changes from JWH-018 to XLR-11 “enhanced” the substance’s effect by, among other things, adding a fluorine atom. Because fluorine “reduce[s] the metabolism of [a] substance,” it allows substances to “stay[] in your body longer,” meaning that less of the substance is necessary to trigger the same effect over time.

C

Zencense employee Ryan Eaton—who had been sent to assist Zencense’s warehouse operations in Las Vegas—was tried alongside Galecki and Ritchie as a co-defendant. However, the jury acquitted Eaton on all six counts with which he was charged. The jury also acquitted Galecki and Ritchie on two drug-trafficking counts involving a *different* alleged analogue, known as “AM 2201” (Counts 20–21), but it convicted both men on all remaining counts, including all five drug-trafficking charges involving XLR-11 (Counts 22–26).³ Galecki and Ritchie were each sentenced to 20 years

³ Specifically, the jury convicted Galecki and Ritchie of the following five drug-trafficking offenses: (1) conspiracy to manufacture, possess with intent to distribute, and distribute XLR-11, in violation of 21 U.S.C. § 846 (Count 22); (2) manufacture of XLR-11, in violation of 21 U.S.C. § 841(a)(1) (Count 23); (3) distribution of XLR-11, in violation of 21 U.S.C. § 841(a)(1) (Count 24); (4) maintaining drug-involved premises, in violation of 21 U.S.C. § 856(a)(1) (Count 25); and (5) possession of a “listed chemical” (*viz.*, acetone) with intent to manufacture a substance containing a detectable amount of XLR-11, in violation of 21 U.S.C.

in prison, followed by three years of supervised release, and a criminal forfeiture order was entered against both of them. Galecki and Ritchie timely appealed, and we have jurisdiction under 28 U.S.C. § 1291.

II

We first address Defendants’ contention that all of their convictions should be set aside on the ground that the district court erred in refusing to suppress evidence seized during or as a result of the raid at Zencense’s Nevada warehouse.

In June 2016, Galecki filed a motion to suppress, asserting that the search warrant affidavit contained false and misleading information in violation of *Franks v. Delaware*, 438 U.S. 154 (1978). The district court denied this motion on the ground that Galecki had not established that he had Fourth Amendment “standing” to challenge a search of a warehouse leased, not by him, but by Zencense. *See United States v. SDI Future Health, Inc.*, 568 F.3d 684, 695 (9th Cir. 2009) (holding that, as “a matter of substantive Fourth Amendment law,” a person challenging a search or seizure must show that there has been a violation of that Amendment “as to him, personally” (emphasis added) (simplified)); *see also Byrd v. United States*, 138 S. Ct. 1518, 1530 (2018) (noting that “Fourth Amendment ‘standing’” “should not be confused with Article III standing, which is jurisdictional”). Ritchie subsequently filed his own motion to suppress—which Galecki later joined—arguing that the search warrant affidavit both was defective under *Franks* and failed to

§ 841(c) (Count 26). (The statutory definition of “listed chemical” refers to a distinct list of chemicals that are used in the manufacture of controlled substances, and that term therefore does not correspond to the above-described schedules of controlled substances. *See* 21 U.S.C. § 802(33), (35)(B).)

establish probable cause. The district court denied this motion as to both Defendants on the ground that it was an improper motion to reconsider the earlier order denying Galecki's motion to suppress.

We need not decide whether the district court erred in treating Ritchie's motion as an improper motion for reconsideration. Reviewing the merits of the Fourth Amendment standing de novo as to both Defendants, *see United States v. Lopez-Cruz*, 730 F.3d 803, 807 (9th Cir. 2013), we conclude that the district court correctly denied the motions.

In arguing that they have standing to challenge the search of Zencense's Nevada warehouse, Defendants assert that they each had a "reasonable expectation of privacy" in those premises. *See Byrd*, 138 S. Ct. at 1526–27 (noting that this test for Fourth Amendment standing "was derived from the second Justice Harlan's concurrence in *Katz v. United States*, 389 U.S. 347 (1967)"). To establish standing under this test, Defendants had to show that they "manifested a subjective expectation of privacy" in the Nevada warehouse that "society is willing to recognize ... as reasonable." *California v. Ciraolo*, 476 U.S. 207, 211 (1986). We conclude that Defendants failed to make that showing.

As we have recognized, determining *who* may assert a reasonable expectation of privacy with respect to specific *commercial* spaces "requires analysis of reasonable expectations 'on a case-by-case basis.'" *SDI Future Health*, 568 F.3d at 695 (quoting *O'Connor v. Ortega*, 480 U.S. 709, 718 (1987) (plurality)). The need for such a case-by-case inquiry arises from two considerations. First, because "the expectation of privacy that the owner of commercial property enjoys in such property differs significantly from

the sanctity accorded an individual's home," *Donovan v. Dewey*, 452 U.S. 594, 598–99 (1981), the "expectation of privacy in commercial premises" is "less than[] a similar expectation in an individual's home." *New York v. Burger*, 482 U.S. 691, 700 (1987); *see also Minnesota v. Carter*, 525 U.S. 83, 90 (1998) ("Property used for commercial purposes" is thus "treated differently for Fourth Amendment purposes from residential property."). Second, in light of the "great variety of work environments," any given company officer, manager, or owner may not have the same personal reasonable expectation of privacy in *all* of the commercial spaces of the organization. *SDI Future Health*, 568 F.3d at 695.

In *SDI Future Health*, we identified a number of considerations that inform the determination as to whether a particular individual has a reasonable expectation of privacy in a specific company space. First, we noted that, under our decision in *United States v. Gonzalez, Inc.*, 412 F.3d 1102 (9th Cir. 2005), the joint owners and managers of a "small business," particularly one that is "family-run," may exercise such complete "day-to-day" personal control over, and "full access" to, the company's facilities that those owner/managers would have a reasonable expectation of privacy over the relevant spaces. *SDI Future Health*, 568 F.3d at 696 (citing *Gonzalez, Inc.*, 412 F.3d at 1116–17); *see also Gonzalez, Inc.*, 412 F.3d at 1117 (noting, by contrast, that "the hands-off executives of a major corporate conglomerate might lack standing to challenge all intercepted conversations at a commercial property that they owned, but rarely visited").

Second, we stated in *SDI Future Health* that a further "crucial" threshold factor is whether the particular place searched in the commercial facility was "given over to the

defendant's exclusive use,” 568 F.3d at 695–96 (emphasis added) (simplified), because a showing of such exclusivity would indicate that, absent countervailing considerations, the person’s expectation of privacy was reasonable.

Third, *SDI Future Health* held that, outside “the case of a small business over which an individual exercises daily management and control, an individual challenging a search of workplace areas beyond his own internal office must generally show some *personal connection* to the places searched and the materials seized.” 568 F.3d at 698 (emphasis added). We further stated that whether the requisite personal connection has been shown should be assessed “with reference to the following factors,” which we said are not exclusive, *id.* at 698 & n.8:

- (1) whether the item seized is personal property or otherwise kept in a private place separate from other work-related material;
- (2) whether the defendant had custody or immediate control of the item when officers seized it; and
- (3) whether the defendant took precautions on his own behalf to secure the place searched or things seized from any interference without his authorization.

Id. at 698 (footnotes omitted). “Absent such a personal connection or exclusive use, a defendant cannot establish standing for Fourth Amendment purposes to challenge the search of a workplace beyond his internal office.” *Id.*

Under this framework, Galecki and Ritchie did not establish Fourth Amendment standing with respect to the Nevada warehouse. First, this case does not fall within the distinctive scenario, typified by *Gonzalez, Inc.*, in which the

defendants personally exercise day-to-day physical access to and control over the facilities as part of their daily management of a closely held small business. Indeed, the record does not affirmatively indicate that Galecki and Ritchie had ever actually visited the Nevada warehouse, much less exercised personal day-to-day control over the physical plant. Second, the Nevada warehouse is not the personal office of either Defendant. Because this case thus does not fall into either of these two scenarios, we consider whether Defendants established that, in light of the factors identified in *SDI Future Health*, they had the requisite “personal connection to the places searched and the materials seized.” 568 F.3d at 698.

As to the first *SDI Future Health* factor, the items seized from Zencense’s Nevada warehouse were not the “personal property” of Galecki or Ritchie, nor were they “kept in a private place separate from other work-related material.” *Id.* Rather, they were materials used in the manufacture of Zencense’s products, such as XLR-11, plant material, acetone, and flavorings; physical equipment, such as drying racks; or documents, such as packing slips, handwritten notes concerning flavorings, and a document relating to rental of a facility. Because “the first factor really addresses whether the item seized was personal property without any relationship to work,” *id.* at 697, it provides no support for finding the requisite personal connection to the warehouse.

The second *SDI Future Health* factor likewise provides no basis for finding standing, because neither Galecki nor Ritchie had personal “custody or immediate control” of the items at the time that they were seized. *Id.* at 698. As noted earlier, there does not appear to be any record evidence that either Defendant ever even visited the warehouse, which was thousands of miles from Zencense’s Florida headquarters.

Moreover, Defendants concede that neither of them was present at the warehouse at the time it was searched.

The third *SDI Future Health* factor addresses whether the defendant “took precautions *on his own behalf* to secure the place searched or things seized from any interference without his authorization.” *Id.* (emphasis added). This “third factor involves actions the employee takes on his own behalf, *not as an agent of the [company].*” *Id.* at 697 (emphasis added). Defendants have pointed to no such evidence in the record. Instead, they point to the fact that *Eaton* took steps to keep the warehouse locked and secure and that Defendants had the legal right, as managers of Zencense, to prohibit others from entering the property. At best, those actions show only that Defendants took steps *as agents of Zencense* to ensure the security of the company’s property, and not that they took any steps to secure the warehouse or its contents on their own behalf. As we made clear in *SDI Future Health*, it is not enough that Defendants set “general policy” over company premises, “put in place significant security measures” there, or took “steps to protect the privacy” of the building. *Id.* Under this factor, there must be some showing that actions were taken for the benefit of Galecki or Ritchie personally, as opposed to the benefit of the company as a whole. There is no such evidence.

Nor does the record disclose any other factor, beyond the three we identified in *SDI Future Health*, that would support finding the required “personal connection” to the Nevada warehouse. *See id.* at 698 n.8.⁴ Accordingly, we hold that

⁴ Defendants point to the general factors that we used to analyze Fourth Amendment standing in *Lopez-Cruz*, such as whether the defendant has a property interest in the place searched, whether the defendant has the

Galecki and Ritchie failed to establish that they have Fourth Amendment standing to challenge the search of the Nevada warehouse and that the district court therefore properly denied their motions to suppress.

III

We reject Defendants’ challenges to their convictions for drug trafficking in violation of the CSA.

A

Defendants argue that the evidence was insufficient to establish the scienter required in a CSA prosecution resting on the Analogue Act. We disagree.

In *McFadden v. United States*, 576 U.S. 186 (2015), the Supreme Court addressed “the knowledge necessary for conviction” under the principal drug-trafficking statute, 21 U.S.C. § 841(a)(1), “when the controlled substance at issue” is “an analogue” rather than a scheduled controlled substance. 576 U.S. at 188. The Court held that such knowledge could be established in either of two ways. First, the Government may establish the requisite scienter “by evidence that a defendant knew that the substance with which he was dealing is some controlled substance—that is, one actually listed on the federal drug schedules or treated as such by operation of the Analogue Act—regardless of whether he knew the particular identity of the substance.” *Id.* at 194. Second, the Government may prove scienter “by

right to exclude others from it, and whether he took “normal precautions to maintain privacy.” 730 F.3d at 808 (citation omitted). In light of these factors, *Zencense* would clearly have standing to challenge the search of the warehouse had it been prosecuted. *See SDI Future Health*, 568 F.3d at 694 n.3. But in the specific context of an owner, manager, or employee of a company, these factors must be viewed within the context of the *SDI Future Health* framework.

evidence that the defendant knew the specific analogue he was dealing with, even if he did not know its legal status as an analogue.” *Id.*

The Court also elaborated on the actual sorts of proof that might satisfy these two alternatives. As to the first—*i.e.*, knowledge that the substance is a “controlled substance”—the Government can rely on either “direct evidence,” such as “past arrests that put a defendant on notice of the controlled status of a substance,” or “circumstantial evidence,” such as, “a defendant’s concealment of his activities, evasive behavior with respect to law enforcement, knowledge that a particular substance produces a ‘high’ similar to that produced by controlled substances, and knowledge that a particular substance is subject to seizure at customs.” *Id.* at 192 n.1; *see also id.* at 195 n.3. As to the second alternative, the Court explained that the requisite scienter exists if the Government shows that the defendant had knowledge of the features of the substance that make it an analogue under the Analogue Act’s definition. *Id.* at 194. In such a case, it is the knowledge of the *features* that counts; the “defendant need not know of the existence of the Analogue Act.” *Id.* at 195.

In assessing the sufficiency of the trial evidence of scienter under these standards,⁵ we ask only “whether, after viewing the evidence in the light most favorable to the

⁵ We note that *McFadden* addressed only a prosecution under § 841(a)(1), whereas in Defendants’ case, only two of the five relevant drug-trafficking charges rested specifically on that statute. *See supra* note 3. Nonetheless, the parties and the district court proceeded on the assumption that the same scienter requirements that apply under *McFadden* in a § 841(a)(1) case are also applicable to the charges against Defendants under §§ 841(c), 846, and 856(a)(1). We will proceed, *arguendo*, on the same assumption.

prosecution, *any* rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt.” *Jackson v. Virginia*, 443 U.S. 307, 319 (1979); *see also United States v. Nevils*, 598 F.3d 1158, 1163–64 (9th Cir. 2010) (en banc). Here, we conclude that the evidence was sufficient to permit a rational jury to find scienter under *McFadden*’s first alternative—namely, that Defendants dealt with a substance with “knowledge that [it] is listed [under the CSA] or treated as listed by operation of the Analogue Act.” *McFadden*, 576 U.S. at 196.⁶ In particular, the record in this case includes evidence of each of the four types of circumstantial evidence that *McFadden* identified as supporting a finding of scienter under this first alternative. *Id.* at 192 n.1; *see also id.* at 195 n.3.

First, the Government presented evidence that Galecki and Ritchie each knew that XLR-11 “produces a ‘high’ similar to that produced by controlled substances.” *Id.* at 192 n.1. As noted earlier, a retailer who purchased spice from Zencense testified that Ritchie told him that if a person smoked spice, “it would knock you out for a couple of hours on the floor.” And the owner of a business that sold XLR-11 to Zencense testified that Galecki had told him that XLR-11 was more popular than another cannabinoid because the former was “fluorinated,” which “made it stronger” so that the “high lasts longer.”

Second, there was evidence of “evasive behavior with respect to law enforcement.” *McFadden*, 576 U.S. at 192 n.1. In particular, Biggerstaff testified that, to address the possibility that Zencense’s products would be “seized” or

⁶ We therefore need not consider whether sufficient evidence supported finding scienter under *McFadden*’s second alternative. *See Griffin v. United States*, 502 U.S. 46, 56–60 (1991).

“confiscated” by law enforcement, the company maintained “secret” storage locations “that just the higher-ups in the company knew about so that if we ever had an interruption in business, we could continue to sell because we still had product that hadn’t been confiscated.” Biggerstaff stated that, on at least one occasion, Ritchie personally took him once to these storage facilities, and he also testified that Ritchie told him not to say anything to anyone else about these units. Cory Finch, a Zencense employee, testified that Galecki sent him a text message regarding a Dodge work truck that appeared to have expired registration tags. Galecki stated that the truck could get “pulled over” and informed Finch that if he did get pulled over in the truck, there was a receipt showing the registration had been renewed. In the meantime, Galecki instructed Finch not to place “product in the Dodge until we have the new sticker.”

Defendants emphasize that Ritchie freely gave DEA Agent Cosey a tour of Zencense’s Florida facility, but that tour was given only *after* DEA agents had already raided the Nevada warehouse. Weighing the competing inferences that may be drawn from the record, the jury could reasonably conclude that this tour, which was given only after the cat was already out of the bag, reflected simply a disingenuous and opportunistic shift in strategy towards law enforcement. That inference is further bolstered by the fact that, during the tour, Ritchie implausibly claimed to Agent Cosey that he was unaware that customers were smoking Zencense products.

Third, there was evidence from which the jury could rationally infer that Defendants knew that the substances involved were “subject to seizure at customs.” *McFadden*, 576 U.S. at 192 n.1. Specifically, Defendants were well aware that the XLR-11 that they imported from China was

misabeled as containing other products, such as “cytidine-5' monophosphate.” A rational jury could conclude that the products were mislabeled in this way precisely to avoid their seizure by customs. Defendants argue that this practice was standard throughout the spice industry, but that point does not *preclude* the jury from drawing a permissible adverse inference from the use of such mislabeling. Moreover, as noted earlier, Defendants were aware of, and planned for, the possibility that some of their products might be seized or confiscated. In addition, even prior to the search of the Nevada warehouse, Ritchie was informed of raids on retail establishments, and at one point Zencense had a policy of reshipping an order if the product that it shipped to a retailer was seized.

Fourth, there was ample evidence that Defendants took additional steps to “conceal[,]” to the extent that they could, the nature of their “activities.” *McFadden*, 576 U.S. at 192 n.1. As we have explained, the evidence readily supports the inference that Defendants knew that their products would be consumed by those who purchased them from smoke shops and other retailers. Defendants, however, sought to obscure that fact by labeling their products as “potpourri” or “incense” and “not for human consumption.” They similarly instructed their employees not to refer to the spice as having “flavors,” which could connote ingestion. Defendants were also aware that their “potpourri” products sold for very high prices that vastly exceeded what a home aromatic would actually fetch, which further supports a reasonable inference that Defendants were engaged in a charade that sought to avoid formally admitting what they knew that they were selling.

The record also contains additional circumstantial evidence beyond the four types that *McFadden* identified.

Because Templeman testified that Ritchie explained the concept of an “analogue” to her, the jury could infer that Ritchie was specifically familiar with the Analogue Act. There was also testimony that, during the relevant timeframe, spice distributors, including Zencense, serially switched the cannabinoids they used as one after another was formally added to the CSA’s schedules. When asked to explain why Zencense kept changing the cannabinoid it used, Templeman stated that “we knew that we were just staying one step ahead of legality.”

Considering the record evidence as a whole, we have little difficulty concluding that a rational jury could find, beyond a reasonable doubt, that both Galecki and Ritchie had the scienter required for an Analogue Act case under *McFadden*. See *United States v. Anwar*, 880 F.3d 958, 967–68 (8th Cir. 2018).

B

We next address Defendants’ contention that the district court erred in giving a “deliberate ignorance” instruction modeled on this court’s en banc decision in *United States v. Jewell*, 532 F.2d 697 (9th Cir. 1976) (en banc). Under *Jewell*, the Government can satisfy the scienter requirement in a drug-trafficking case by showing that “[1] the defendant [was] aware” that it was “highly probable” that he was dealing with a controlled substance but [2] he acted with “a conscious purpose to avoid learning the truth.” *Id.* at 704 (citation omitted); see also *United States v. Heredia*, 483 F.3d 913, 919–21 (9th Cir. 2007) (en banc). Defendants contend that there was insufficient evidence to support giving such an instruction here. See *United States v. Yi*, 704 F.3d 800, 804 (9th Cir. 2013) (“An instruction is appropriate if it is ‘supported by law and has foundation in the

evidence.” (citation omitted)).⁷ We review the district court’s conclusion that the evidence supported a *Jewell* instruction only for an abuse of discretion, see *Heredia*, 483 F.3d at 921–22, and in conducting that review, we “must view the evidence in the light most favorable to the party requesting it,” *Yi*, 704 F.3d at 804 (citation omitted). We find no abuse of discretion.

As framed in the jury instructions here, the first element of the *Jewell* standard is that “the defendants . . . were aware of a high probability that the charged controlled substance analogue or analogues were treated as a controlled substance by the Analogue Act.” This element is amply supported in the trial record. As we have explained, there was substantial evidence to support a finding that Defendants *actually knew* that XLR-11 was treated as a controlled substance under the Analogue Act. It necessarily follows that the evidence was likewise sufficient to support the conclusion that Defendants knew, at a minimum, that there was a high probability that XLR-11 was a controlled substance analogue.

There was also sufficient evidence to support the second element of the *Jewell* standard—*i.e.*, that Defendants “deliberately avoided learning the truth” about XLR-11. As set forth earlier, Defendants were well aware that their trafficking in XLR-11 had to be concealed, at all stages, from law enforcement in order to avoid seizure of the XLR-11 and their smokable products containing it. Defendants also changed the cannabinoid that they used as earlier ones were listed on the CSA’s schedules, which further supports an

⁷ Defendants do not contend that *Jewell*’s deliberate-ignorance standard is inapplicable to Analogue Act cases under *McFadden*, and we therefore assume *arguendo* that the district court’s *Jewell* instruction correctly stated the law. Cf. *Anwar*, 880 F.3d at 967–68 (upholding a “deliberate ignorance” instruction in an Analogue Act case).

inference that they deliberately attempted to select close-to-the-edge substances that they could superficially claim were not yet *obviously* illegal but that would undoubtedly produce the high that their ultimate consumers wanted. On this record, a jury could reasonably conclude that Defendants deliberately avoided learning whether XLR-11 was treated as a controlled substance under the Analogue Act.

We therefore hold that the district court did not abuse its discretion in concluding that its *Jewell* instruction had a sufficient foundation in the evidence.

C

Defendants contend that, as applied in this case, the Analogue Act's requirement that the substance in question have a "chemical structure" that is "substantially similar to the chemical structure of a controlled substance in schedule I or II," *see* 21 U.S.C. § 802(32)(A)(i), is unconstitutionally vague. "As generally stated, the void-for-vagueness doctrine requires that a penal statute define the criminal offense with sufficient definiteness that ordinary people can understand what conduct is prohibited and in a manner that does not encourage arbitrary and discriminatory enforcement." *Kolender v. Lawson*, 461 U.S. 352, 357 (1983). Defendants argue that the underlying standard for determining chemical structural similarity is impermissibly vague and that "[n]o person of ordinary intelligence would have a reasonable opportunity to 'know' that XLR-11 is 'substantially similar' in chemical structure to JWH-018." We reject Defendants' as-applied vagueness challenge.

Because the phrase "substantially similar" "is not further defined by the statute, we give that phrase its ordinary meaning." *United States v. Kuzma*, 967 F.3d 959, 968 (9th Cir. 2020). In common parlance, "similar" means "having

characteristics in common” or “alike in substance or essentials.” *Similar*, WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 2120 (1981 ed.) (“WEBSTER’S THIRD”). The word “substantial,” as relevant here, means that the thing “specified” is present “to a large degree or in the main.” *Substantial*, WEBSTER’S THIRD, *supra*, at 2280. Accordingly, the chemical structures of two substances are “substantially similar” if they share common essential characteristics “to a large degree or in the main.” Further, the term “structure,” as used in the context of a chemical, refers to “the arrangement of particles or parts in a substance,” as in “the arrangement and mode of union of the atoms in a molecule.” *Structure*, WEBSTER’S THIRD, *supra*, at 2267. The statute thus requires, at a minimum, that the two chemicals share, to a large degree or in the main, common components in terms of the arrangement of atoms and the chemical bonds between those atoms. However, because the statute only requires “substantial” similarity, it clearly contemplates that two substances may contain *some* differences in their chemical structures and yet still be sufficiently “alike” in their “essentials” to remain “substantially similar.” Under these standards, Defendants’ as-applied vagueness challenge fails.

As an initial matter, the trial evidence in this case provided an ample basis to conclude that XLR-11 satisfies the statutory requirement that, at a minimum, it must share common chemical structural features, in terms of the arrangement of atoms and chemical bonds, with JWH-018. As set forth earlier, the Government presented expert testimony that XLR-11 and JWH-018 share a common “acylindole core,” including the “same atoms” in the “same locations” with the “exact same structure.” *See supra* section I(B)(2). Defendants note that, despite this common

chemical core, there are also some structural differences between the two substances. Specifically, as we have explained, the Government's chemical expert noted two differences in the respective chemical structures of XLR-11 and JWH-018: (1) in contrast to JWH-018, "a fluorine atom" was substituted in the tail portion of XLR-11's structure; and (2) the "naphthyl group" in JWH-018 was replaced by a "tetramethylcyclopropyl" group in XLR-11. *See supra* section 1(B)(2). Accordingly, the question here is whether the statute provides an adequate basis for assessing whether these particular differences in the two substances' chemical structures are sufficiently significant that, despite their common chemical core, XLR-11 and JWH-018 should *not* be considered "substantially similar" in "chemical structure."

In addressing that question, we agree with the Second Circuit's observation that, in judging similarity of chemical structure, what matters is whether the particular structural differences between two otherwise similar chemicals make a difference "in the substance's *relevant* characteristics." *United States v. Roberts*, 363 F.3d 118, 124 (2d Cir. 2004) (emphasis added). In *Roberts*, the court noted that, apart from "only two atoms," the two substances in question had otherwise identical chemical structures, as reflected in "two-dimensional diagrams of the molecules." *Id.* The Government argued that this high percentage of overlapping chemical structural similarity should be enough, "standing alone," to "establish substantial similarity in chemical structure." *Id.* (simplified). The court declined to adopt this argument, noting that it would not be the "appropriate rule to apply in every situation" because, "[i]n another case, it might well be that a one- or two-atom difference in a molecule made such a radical difference in the substance's

relevant characteristics that any similarity in two-dimensional charts would not be ‘substantial’ enough to satisfy the definition of ‘controlled substance analogue.’” *Id.* This analysis indicates that at least *one* way to establish the required substantial similarity in chemical structure would be to show that (1) the alleged analogue shares a significant core of common chemical structural features with a listed substance, in terms of arrangement of atoms and chemical bonds; and (2) any residual differences in the analogue’s chemical structure, as compared to that of a listed substance, do not result in a material “difference in the substance’s relevant characteristics.” *Id.*⁸

Under that standard, Defendants’ as-applied vagueness challenge must be rejected. Here, the trial evidence provides a sufficient basis for concluding that XLR-11 and JWH-018 share a common core of identical chemical structural features and that the subset of differences between the two chemicals does not make a difference in the substance’s “relevant characteristics.” Here, the Government’s expert on chemical structure testified that the replacement of the “naphthyl group” in JWH-018 with a “tetramethylcyclopropyl” group in XLR-11 was not a “significant enough change,” because it would not materially affect the substance’s chemical “binding affinity in the cannabinoid receptors.” *Cf. Roberts*, 363 F.3d at 125 (considering, in judging chemical similarity, how the body metabolized the analogue). As for the “addition of a fluorine

⁸ There may well be other ways to establish the required substantial similarity in chemical structure, and our decision should not be understood as foreclosing other possible approaches that may be appropriate in other cases with different facts. For purposes of the as-applied challenge presented here, the approach suggested by the Second Circuit’s *Roberts* decision is sufficient to resolve this case.

atom” in XLR-11, the Government presented expert testimony at trial that the only relevant resulting difference in chemical interaction and processing inside the body was that the presence of a fluorine atom “help[s] the drug stay in the body and not be metabolized or excreted too quickly.”

Moreover, as the Supreme Court noted in *McFadden*, the *other* elements of an offense, such as scienter, can serve to alleviate vagueness concerns by independently narrowing the potential range of conduct covered by the statute. 576 U.S. at 197. As noted earlier, there is ample evidence in the record to permit a jury to conclude that Defendants were aware that XLR-11 was a controlled substance under the Analogue Act, even if they did not know its precise chemical structure. *See supra* section III(A). As a result, Defendants are poorly positioned to contend that they could not be expected to discern, through ordinary intelligence, the line between lawful and unlawful conduct that is reflected in the substantially-similar-chemical-structure element of the statutory definition of an analogue. *See Grayned v. City of Rockford*, 408 U.S. 104, 108 (1972). Additionally, Defendants are simply wrong in contending that vagueness doctrine precludes Congress from ever drawing legal lines that take account of the complexities of the underlying subject matter being regulated. Those who traffic in substances that they know will be ingested by consumers and will have significant pharmacological effects can hardly be heard to complain that the relevant line-drawing may involve a level of complexity that, as here, may call for expert testimony.

The asserted vagueness of the substantially-similar-chemical-structure element is further significantly mitigated by the additional requirement that there be substantial similarity in the actual or represented pharmacological *effect*

of the alleged analogue.⁹ Even though the two elements of substantial similarity in chemical structure and substantial similarity in pharmacological effect are separate and distinct, the two elements can operate in tandem to adequately narrow the as-applied scope of the statute in a particular case. For example, in a case—such as this one—in which the jury is instructed to use the *same* listed substance (here, JWH-018) in evaluating both elements of the definition of an “analogue,” the requirement that there be a substantial similarity in pharmacological effect will have the *practical* consequence of placing an outer limit on the range of relevant differences in chemical structure. That is, in such a case, the statute’s elements will *not* all be met if the difference in chemical structure in the analogue—even if it seems superficially trivial—substantially alters the analogue’s pharmacological effect. This additional element places a significant outer limit on the range of chemical variations that will fall within the statutory definition of the offense *as a whole*, thereby further mitigating any vagueness concerns.

Here, the expert testimony presented by the Government at trial was that the two above-identified differences in chemical structure between XLR-11 and JWH-018 did not impede XLR-11 from having a substantially similar pharmacological effect as JWH-018. Specifically, Dr. Trecki described the concept of an “activity cliff,” which refers to a structural change to a chemical that causes it to “lose the pharmacological activity, meaning, in more

⁹ As we have observed, *see supra* at 12–13, the statute actually phrases this additional requirement in the disjunctive, which might suggest that it is an *alternative* element rather than an additional one. However, the Government has repeatedly conceded, in this case and elsewhere, that it is an additional requirement. *See McFadden*, 576 U.S. at 194 n.2.

layman's terms, if you make a certain change, the drug will stop working." Dr. Trecki then explained that the chemical differences between XLR-11 and JWH-018 did *not* result in such an activity cliff:

So when we look at the differences in the functional groups between . . . JWH-018 and XLR-11, the changes that scientists used to make these new molecules, it retained and actually intensified the pharmacological effect of the substance. The activity cliff phenomena or theory did not apply here. The substances all continued to work well or greater than the original JWH substance.

Indeed, neither of Defendants' experts affirmatively opined that the differences in chemical structure on which they focused would lead to XLR-11 having overall materially reduced pharmacological effects than JWH-018.

Taking all of the foregoing points together, we reject Defendants' as-applied vagueness challenge to the statutory definition of a "controlled substance analogue."

D

Defendants argue that their due process rights were violated by the district court's failure to compel the Government to grant use immunity to two potential defense witnesses who would have testified as to Defendants' scienter concerning whether XLR-11 was covered by the Analogue Act. Specifically, Defendants sought to call Timothy Dandar, a lawyer who would have testified that he advised Defendants that XLR-11 was "not an illegal product under the Controlled Substance Analogue Act," and Adam

Libby, a chemist who would have testified that he advised Defendants that XLR-11 was not substantially similar in chemical structure to JWH-018. The parties agreed below that, if called as witnesses, Dandar and Libby would assert their Fifth Amendment rights. The Government declined to grant Dandar and Libby use immunity and the trial court denied a motion by the defense to compel the Government to do so. Reviewing *de novo*, *see United States v. Straub*, 538 F.3d 1147, 1156 (9th Cir. 2008), we conclude the trial court did not err.

“[F]or a defendant to compel use immunity[,] the defendant must show that: (1) the defense witness’s testimony was relevant; and (2) either (a) the prosecution intentionally caused the defense witness to invoke the Fifth Amendment right against self-incrimination with the purpose of distorting the fact-finding process; or (b) the prosecution granted immunity to a government witness in order to obtain that witness’s testimony, but denied immunity to a defense witness whose testimony would have directly contradicted that of the government witness, with the effect of so distorting the fact-finding process that the defendant was denied his due process right to a fundamentally fair trial.” *Id.* at 1162. There is no dispute that Dandar’s and Libby’s testimony would have been “relevant” at step one of the *Straub* test. *Id.* The only question is whether the district court correctly concluded that the Defendants failed to establish either of the two *Straub* alternatives at step two. It did.

Defendants rely on the second *Straub* alternative, which focuses on the *effect* of the Government’s actions in denying immunity to defense witnesses while granting it to prosecution witnesses. Although Defendants do not point to any witnesses who were formally granted immunity in this

case, the Government concedes in its answering brief that we have held “that government witnesses who are granted favorable plea deals in return for their testimony are encompassed by *Straub*’s use of the term ‘immunized.’” *United States v. Wilkes*, 744 F.3d 1101, 1105 n.1 (9th Cir. 2014). Defendants, however, failed to show, as *Straub* requires, that Libby and Dandar would have given testimony that “directly contradicted” the testimony of one of the Government cooperating witnesses in a way that impermissibly distorted the fact-finding process.

This case bears no resemblance to *Straub*, in which we found the requisite direct contradiction when the defense witness sought to be immunized would have given directly contradictory testimony concerning the critical content of a specific conversation that occurred at a particular place and during a particular timeframe. 538 F.3d at 1162–63. No Government witness here testified to the contents of any communications between Defendants and Dandar or Libby, much less that the contents of those communications were the opposite of what Defendants claimed. Moreover, although (as we have explained) the testimony of the Government’s witnesses supplied evidence from which a rational jury could circumstantially conclude that Galecki and Ritchie knew that XLR-11 was treated as a controlled substance by virtue of the Analogue Act, those witnesses’ testimony also included other elements that refute any suggestion that the refusal to immunize Dandar and Libby resulted in such a distortion of the fact-finding process that the trial was rendered fundamentally unfair. For example, Templeman also testified that she was specifically told by Ritchie and Galecki that the products they were selling were legal. Indeed, after testifying that Ritchie had explained the concept of an analogue to her, Templeman added that she

was not worried that they might actually be selling analogues because *she* “believed the product was legal” based on her conversations with Defendants.

Defendants are not entitled to insist on immunity for any witness that might provide additional testimony that, from Defendants’ point of view, might helpfully contribute to the overall assessment of the circumstantial evidence. They were required, under *Straub*, to show a direct contradiction in testimony that resulted in a fundamentally unfair distortion of the fact-finding process. The district court correctly held that they failed to make that showing.

IV

Defendants contend that the evidence was insufficient to support their convictions for operating a continuing criminal enterprise (“CCE”) in violation of the CSA. *See* 21 U.S.C. § 848. “In order to prove that a defendant is guilty of engaging in a continuing criminal enterprise in violation of 21 U.S.C. § 848, the government must establish (1) that the defendant’s conduct constituted a felony violation of federal narcotics law; (2) that the described conduct occurred as part of a continuing series of violations of federal narcotics law; (3) that the defendant undertook the activity in concert with five or more persons; (4) that the defendant acted as the organizer, supervisor, or manager of the criminal enterprise; and (5) that the defendant obtained substantial income or resources from the purported enterprise.” *United States v. Hernandez-Escarsega*, 886 F.2d 1560, 1570 (9th Cir. 1989). A “continuing series” for purposes of the second element means “three or more federal narcotics violations.” *Id.* “It is not necessary,” for purposes of the third “in concert with” element, that the defendant “act in concert with five or more persons at the same time, or that five or more persons be

engaged in any single criminal transaction.” *United States v. Burt*, 765 F.2d 1364, 1366 (9th Cir. 1985). However, the “in concert with” element does “require[] proof of a conspiracy” sufficient to violate 21 U.S.C. § 846. *Rutledge v. United States*, 517 U.S. 292, 300 (1996). We conclude that the evidence was sufficient under these standards.

Defendants contend that there was insufficient evidence to support the jury’s conclusion that they acted “in concert” (*i.e.*, criminally conspired) with five or more persons. We disagree. The evidence was sufficient to permit a rational jury to conclude that Defendants acted in concert with the following five Zencense employees: Ryan Eaton, Rachel Templeman, Robert Biggerstaff, Corey Finch, and Diana Duty.

Defendants assert that Eaton cannot be counted as one of the five requisite conspirators given that the jury acquitted him on all charges. That is wrong. “It is well established that a person may be convicted of conspiring with a co-defendant even when the jury acquits that co-defendant of conspiracy.” *United States v. Ching Tang Lo*, 447 F.3d 1212, 1226 & n.8 (9th Cir. 2006) (citing *United States v. Powell*, 469 U.S. 57, 65–66 (1984), and *United States v. Valles-Valencia*, 823 F.2d 381, 381–82 (9th Cir. 1987)). As we explained, “inconsistent verdicts do not necessarily lead to the conclusion that the guilty verdict was the incorrect verdict,” because “inconsistent verdicts can just as easily be the result of jury lenity as a determination of the facts.” *Id.* at 1226 n.8 (citation and internal quotation marks omitted). Consequently, “the acquittal of all conspirators but one does not necessarily indicate that the jury found no agreement to act.” *Id.* (citation omitted).

Although the jury's acquittal of Eaton is thus not dispositive, we must still undertake an "independent review of the sufficiency of the evidence" as to whether Galecki and Ritchie conspired with Eaton. *Powell*, 469 U.S. at 67. We conclude that the evidence on that point was indeed sufficient. Finch testified that he trained Eaton how to make spice, including teaching him the same "knowledge of the process and the additives and things like that" that had originally been conveyed to Finch by Galecki. Finch testified that Eaton, after some time working with Zencense in Florida, left for Las Vegas. Shipping records showed that Ritchie then shipped packages to and from Eaton in Las Vegas, with shipping costs to "send[] packages between Burton Ritchie and Ryan Eaton at the warehouse" alone totaling just over \$14,000. When agents raided the Nevada warehouse where Eaton worked, they found industrial cement mixers, drying tables, jugs of flavoring, a large safe, mylar bags, documentation from Zencense's Chinese exporters, and large drums of acetone for processing spice. The Government also presented evidence that Eaton texted an acquaintance that "I do nothing but make itchy spice in a hot warehouse and float in my pool." A special agent testified that Eaton said that he received instructions that "the word 'flavoring' should never be used," that "it should always be referred to as a fragrance rather than a flavor," and that if anyone joked about the phrase "[n]ot for human consumption," that employee could "potentially be fired on the spot." Based on this evidence, a rational jury could find, beyond a reasonable doubt, that Galecki and Ritchie acted in

concert with Eaton in undertaking the underlying drug-trafficking activity.¹⁰

The same is true of Templeman, Biggerstaff, and Finch, all of whom testified at trial. Templeman's testimony provided substantial evidence from which a rational jury could conclude that she and Defendants acted in concert. Templeman testified that she was aware of instructions to use euphemistic language when describing the flavors of Zencense products; that she was aware Zencense shipments had been raided by law enforcement and that she had conveyed that information to Ritchie; that Ritchie told her what an analogue was; and that she, a single Zencense "potpourri" salesperson, made a 5 percent commission on sales, with her commission amounting to between \$100,000 and \$125,000, in the months of May to August 2012 *alone*. Biggerstaff's testimony likewise established that he was aware of the company's requirement to use euphemistic language to describe its products' flavors; was aware Zencense products had been raided by law enforcement; was aware that Defendants controlled what Biggerstaff called "secret" storage units to replace "confiscated" product; had been taught by Galecki to manufacture spice, which Biggerstaff knew contained XLR-11; and that Galecki told him XLR-11 was just "one molecule off" from another synthetic drug. And Finch testified that although he initially thought he was making incense, he later learned he was in fact producing spice; that he had originally been trained to produce spice by Galecki; that he placed "not for human

¹⁰ For the same reason, we reject Defendants' contention that, because he was acquitted, Eaton cannot serve as a supervisee for purposes of establishing that Defendants acted in concert with at least one or more of the five supervisees in undertaking "three or more federal narcotics violations." *Hernandez-Escarsega*, 886 F.2d at 1570.

consumption” stickers on Zencense products; and that he was aware of “the flavor versus fragrance rule” in talking about Zencense products. While Finch testified that he began to believe the product was questionable when interviewed by law enforcement, implying that he had *not* believed the product was illegal prior to that point in time, the jury was not required to credit Finch’s self-serving statements about his own state of mind.

The record evidence is less robust as to Diana Duty, who did not testify at trial. But we must affirm Defendants’ CCE conviction so long as, “viewing the evidence in the light most favorable to the prosecution, *any* rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt.” *Jackson*, 443 U.S. at 319. According to Finch, Duty conducted Finch’s job interview, and she chose to conduct it, not at Zencense’s offices, but at a nearby McDonald’s. After he “passed the interview,” Finch was then “taken back to a unit where I was given the job.” Finch also stated that, after he was hired, it was Duty who instructed him as to “exactly” what “was the terminology we should use.” She stated that “[a]ll plant material” was to be called “product” and that “[t]here’s no flavor; there’s fragrance.” Finch did not think that it was unusual to call plant material “product,” but he thought it seemed “a little odd” that “it was pretty harsh on the flavor versus fragrance rule,” but since “it was a new job,” he “did what [he] was told.” Duty thus had the role of interviewing and clearing a prospective employee off-campus before bringing him back to Zencense’s facility, and she was the one who then instructed that employee in the crucial euphemistic language that was employed by Defendants to describe their products. The nature of Duty’s knowledge and role in the company provides a sufficient circumstantial basis to permit a rational

jury to conclude, beyond a reasonable doubt, that Defendants acted in concert with Duty.

V

Defendants also challenge their convictions for mail fraud, wire fraud, and money laundering (Counts 2–19). We reverse Defendants’ convictions for mail fraud and wire fraud, but we affirm their convictions for money laundering.

A

Defendants argue that the evidence was insufficient to prove all of the elements necessary to sustain their convictions for mail and wire fraud (Counts 9–19).¹¹ “The elements of mail and wire fraud are: (1) proof of a scheme to defraud; (2) using the mails or wires to further the fraudulent scheme; and (3) specific intent to defraud.” *United States v. Sullivan*, 522 F.3d 967, 974 (9th Cir. 2008) (citing 18 U.S.C. §§ 1341, 1343). “In order to prove a ‘scheme to defraud,’ the jury must find that the defendant employed ‘material falsehoods.’” *United States v. Lindsey*, 850 F.3d 1009, 1013 (9th Cir. 2017) (quoting *Neder v. United States*, 527 U.S. 1, 20 (1999)). However, “‘the government does not have to prove actual reliance upon the defendant’s misrepresentations’ to satisfy materiality.” *Id.* at 1014 (quoting *Neder*, 527 U.S. at 25). Rather, “a false statement is material if it has ‘a natural tendency to influence, or [is] capable of influencing,’” the decisionmaker to whom the statement “was addressed.” *Id.* at 1013

¹¹ Specifically, these charges included conspiracy to commit mail fraud in violation of 18 U.S.C. § 1349 (Count 9); conspiracy to commit wire fraud in violation of 18 U.S.C. § 1349 (Count 14); four substantive counts of mail fraud in violation of 18 U.S.C. § 1341 (Counts 10–13); and five substantive counts of wire fraud in violation of 18 U.S.C. § 1343 (Counts 15–19).

(quoting *Neder*, 527 U.S. at 16). We agree that, under these standards, the Government’s evidence at trial was insufficient to prove the mail fraud and wire fraud offenses charged in the indictment.

The scheme to defraud that was charged in the indictment and that was the basis for all of the mail fraud and wire fraud counts was that, “for the purposes of obtaining money from others,” Defendants “made materially false and fraudulent pretenses, representations, and promises that Zencense manufactured and distributed ‘herbal incense,’ ‘potpourri,’ and ‘aromatherapy’ not for human consumption to conceal that they then and there well knew that the ‘herbal incense,’ ‘potpourri,’ and ‘aromatherapy’ was synthetic cannabinoid products for human consumption.” The jury was likewise expressly instructed, nearly verbatim, that all of the fraud charges rested on these alleged false material representations.

The problem with the Government’s theory is that, in assessing whether Defendants made a “material falsehood” for the purpose of obtaining money or property, materiality is judged in relation to the persons *to whom the statement is addressed*. *Lindsey*, 850 F.3d at 1013; *see also Universal Health Servs., Inc. v. United States ex rel. Escobar*, 579 U.S. 176, 193 (2016) (“Under any understanding of the concept, materiality looks to the effect on the likely or actual behavior of the recipient of the alleged misrepresentation.” (simplified)); *Neder*, 527 U.S. at 16 (holding that, in cases charging materially false statements to a government agency or officer, “a false statement is material if it has a natural tendency to influence, or is capable of influencing, the decision of the decisionmaking body *to which it was addressed*.” (emphasis added) (simplified)). Here, the persons to whom the charged statements were made for the

purpose of obtaining money or property were the retailers and end consumers of Zencense's products. But the Government presented no evidence at trial that the specific alleged misrepresentations were materially false to anyone who bought Zencense's products.

The Government presented no evidence whatsoever that the labeling of Zencense's products as "potpourri" and "not for human consumption" had *any* natural tendency to influence retailers or consumers into thinking that they were purchasing extraordinarily expensive high-end home aromatics. All of the Government's evidence, in fact, pointed in precisely the opposite direction—*i.e.*, that the purchasers all understood, and were in on, the charade. For example, the Government introduced testimony from Ryan Yarbro, an employee of a company with a chain of smoke shops that sold Zencense products, and he stated that "everyone, at least in the company I worked for, knew that people would be smoking it." Victor Nottoli, who owned another chain of smoke shops that sold Zencense products, testified that his understanding of Zencense products' use by consumers was that "[t]hey were smoking it." Templeman, a Zencense sales employee, testified that when she used the words "spice or incense or potpourri" to refer to Zencense's products on sales calls to retailers, they "knew what you were talking about."

Moreover, the Government introduced testimony showing that Defendants deliberately *avoided* marketing their products to retailers who were interested in purchasing true potpourri or incense. Asked why the company did not market Zencense potpourri to stores like Target or Walmart, Biggerstaff explained that "[w]e didn't believe they would be a good customer for our product" because they would be expecting "an air freshener," and "that's not the product that

we were selling.” Templeman testified that most of Zencense’s customers “were either smoke shops or alternative adult emporiums, just not your run of the mill products,” and that sales staff did *not* try to market to “Walmart or Bed Bath & Beyond.” The Government also introduced Zencense’s sales script into evidence, and that document instructed salespersons making calls that, if a potential client was unfamiliar with spice, they were to ask if the store sold pipes. If the answer was no, the script explained, “[m]ost likely this will not be a potential customer” because “they are not the kind of store we want to sell to.” In such cases, the script instructed, the salesperson should “[e]nd call, mark ‘Not Interested,’ . . . and mark for deletion.”

At no point did the Government introduce evidence that Defendants intentionally marketed or sold their products as real “spice” to cooking shops, as “incense” to yoga studios, or as “potpourri” to home improvement stores—in other words, directed their products, in any way, toward any retailers or consumers as to whom the “potpourri” label might have had “a natural tendency” to influence them to believe they were purchasing something other than drugs. *Lindsey*, 850 F.3d at 1013. Indeed, the Government underscored the point by bringing the CEO of an actual potpourri company to trial, who testified that he sold his potpourri for 1/90th the price of Zencense’s product, used fundamentally different ingredients in crafting his potpourri, sold his products to an entirely different set of retailers, and did not use secret code words to describe his potpourri products.

On this record, the Government simply failed to prove that Defendants made any materially false statement to purchasers for the purpose of obtaining money or property.

The Government’s evidence confirmed that *both* Defendants *and* the purchasers whose money Defendants were trying to obtain understood the labels “potpourri” and “not for human consumption” as a code for “smokable synthetic cannabinoids.” While “[a] misrepresentation may be material without inducing any actual reliance,” *United States v. Blixt*, 548 F.3d 882, 889 (9th Cir. 2008) (citation omitted)—as in the case of a false statement to an undercover law enforcement officer who is *secretly* aware of the defendant’s fraudulent scheme—there can be no materially false statement when *both* the listener and the hearer *know and intend* that the words being used have the same distinctive meaning.

While Defendants were properly convicted under the CSA, the Government’s effort to shoehorn this case into the mail fraud and wire fraud statutes failed as a matter of law. Defendants were entitled to a judgment of acquittal on these counts.¹²

B

We next address Defendants’ convictions for money laundering offenses (Counts 2-8).¹³ Each of these charges

¹² At oral argument, the Government suggested that the fraud convictions could be sustained on the alternative theory that Defendants falsely stated or implied to retailers that Zencense’s products were *legal*, thereby inducing retailers to purchase products they would otherwise have refrained from purchasing. This contention fails because, as the district court correctly recognized, the jury cannot properly convict a defendant of mail fraud based on different misrepresentations from those that were charged in the indictment. See *United States v. Adamson*, 291 F.3d 606, 614–16 (9th Cir. 2002).

¹³ Specifically, the indictment charged one count of conspiracy to engage in financial transactions to promote unlawful activity, in violation of 18

required the Government to prove either that Defendants carried out (Counts 4–7) or conspired to carry out (Counts 2–3, and 8) financial activity involving “specified unlawful activity.” See 18 U.S.C. § 1956(a)(1), (a)(2)(A), (h). The indictment listed, as the predicate “unlawful activity” for these charges, all of the *other* charged offenses, including both the CSA offenses and the fraud offenses. The jury instructions likewise permitted the jury to rely on the conduct underlying any of the charged violations of the CSA or the fraud offenses. The jury returned general verdicts of guilt on the money laundering charges, without specifying which predicate the jury had relied on in convicting.

Given that we have affirmed Defendants’ convictions as to the CSA offenses but reversed their convictions mail fraud and wire fraud offenses, the question arises whether the jury’s general verdict on the money laundering offenses—which could have rested on any of these predicate offenses—may stand. The Supreme Court has held that, in certain circumstances, a general verdict of guilt must be set aside “where the verdict is supportable on one ground, but not on another, and it is impossible to tell which ground the jury selected.” *Yates v. United States*, 354 U.S. 298, 312 (1957). This rule applies, for example, where the unsupportable ground for the verdict was time-barred by a statute of limitations, see *Yates*, 354 U.S. at 304–11, or was tainted by constitutional error, see *Stromberg v. California*, 283 U.S. 359, 367–68 (1931). However, in *Griffin v. United States*,

U.S.C. § 1956(h) (Count 2); one count of conspiracy to transport funds to promote unlawful activity, in violation of 18 U.S.C. § 1956(h) (Count 3); four substantive counts of transporting funds to promote unlawful activity, in violation of 18 U.S.C. § 1956(a)(2)(A) (Counts 4–7); and one count of conspiracy to launder monetary instruments in violation of 18 U.S.C. § 1956(h) (Count 8).

502 U.S. 46 (1991), the Supreme Court distinguished *Yates* and *Stromberg* and upheld a general verdict of conviction for conspiracy, even though the verdict could have rested on “either one of the two objects of the conspiracy” and one of those objects was supported by insufficient evidence. *Id.* at 48, 60 (emphasis omitted). Indeed, the Court described any such proposed extension of *Yates* to the insufficiency context as “unprecedented and extreme.” *Id.* at 56. Moreover, the Court noted that it had previously squarely held that “when a jury returns a guilty verdict on an indictment charging several acts in the conjunctive, . . . the verdict stands if the evidence is sufficient with respect to any one of the acts charged.” *Turner v. United States*, 396 U.S. 398, 420 (1970) (quoted in *Griffin*, 502 U.S. at 56–57). The Court held that the resulting “distinction between legal error (*Yates*) and insufficiency of proof (*Turner*)” is one that “makes good sense”:

Jurors are not generally equipped to determine whether a particular theory of conviction submitted to them is contrary to law—whether, for example, the action in question is protected by the Constitution, is time barred, or fails to come within the statutory definition of the crime. When, therefore, jurors have been left the option of relying upon a legally inadequate theory, there is no reason to think that their own intelligence and expertise will save them from that error. Quite the opposite is true, however, when they have been left the option of relying upon a factually inadequate theory,

since jurors are well equipped to analyze the evidence.

Griffin, 502 U.S. at 58–59.

Because we have reversed the mail fraud and wire fraud convictions for insufficiency of the evidence, this case would appear to be governed by the *Griffin*/*Turner* insufficiency rule rather than the *Yates* legal-error rule. On the other hand, the jury here arguably was not “well equipped” to detect the insufficiency of the evidence as to the mail fraud and wire fraud predicates, *see Griffin*, 502 U.S. at 59, because the jury *did* convict Defendants of those offenses despite the evidentiary insufficiency that we have identified. Moreover, we have previously recognized that, in some cases, a conclusion that the evidence was insufficient may actually rest more on a legal determination than a factual one—*i.e.*, it may rest on the conclusion that the *amply proved conduct* simply “fails to come within the statutory definition of the crime” as charged in the indictment. *Griffin*, 502 U.S. at 59 (stating that such a legal determination is subject to the *Yates* rule); *see United States v. Gonzalez*, 906 F.3d 784, 791 (9th Cir. 2018) (characterizing our prior decision in *United States v. Manarite*, 44 F.3d 1407, 1413 (9th Cir. 1995), as an example of an insufficiency determination that actually rests on a “legal deficiency” that, under *Griffin*, would be subject to the *Yates* rule). We conclude that we need not decide whether this case is governed by the *Griffin*/*Turner* rule or the *Yates* rule. Even assuming that *Yates* applies, the Supreme Court has squarely held that “errors of the *Yates* variety are subject to harmless-error analysis.” *Skilling v. United States*, 561 U.S. 358, 414 (2010). We conclude that any *Yates* error here was harmless.

Skilling held that “[h]armless error analysis,” which was described in the context of “collateral review” in *Hedgpeth v. Pulido*, 555 U.S. 57 (2008), “applies equally to cases on direct review.” 561 U.S. at 414 n.46. *Hedgpeth* held that *Yates* errors are governed by the same harmless-errors standards that otherwise govern instructional errors, including the omission of an element, *see Hedgpeth*, 555 U.S. at 60–62, and in the context of direct review, those standards were set forth in *Neder*, 527 U.S. at 18–19. Under *Neder*’s standards, a *Yates* error is harmless if, after a “thorough examination of the record,” we are able to “conclude beyond a reasonable doubt that the jury verdict would have been the same absent the error.” *Id.* at 19. As we shall explain, that standard is met here.

As noted earlier, the money laundering counts on which Defendants were convicted consisted of four substantive counts of transporting funds to promote unlawful activity, in violation of 18 U.S.C. § 1956(a)(2)(A) (Counts 4–7), and three different conspiracy counts charged under 18 U.S.C. § 1956(h). Each of the four substantive counts rested on a specific monetary transfer from a Zencense account to a bank account in Jiaojiang, China. Given that these large payments to a Chinese account were clearly in payment for the XLR-11 that was being purchased by Zencense from China, these four particular monetary transactions were *directly* tied to the drug-trafficking activity underlying the CSA charges and only derivatively and indirectly tied to the domestic sales activities that underlay the mail fraud and wire fraud charges. Given that fact, we have little difficulty concluding, beyond a reasonable doubt, that the jury’s conviction on these four substantive accounts “would have been the same absent” the asserted *Yates* error in giving the jury the alternative option of relying on the fraud charges.

Neder, 527 U.S. at 19. And because Count 3 explicitly charged a conspiracy to transfer money “from a place in the United States to and through a place outside of the United States, namely, China,” the same reasoning readily leads us to conclude that any *Yates* error with respect to that conspiracy count was likewise harmless.

That leaves only the conspiracy charges in Count 2, which alleged a conspiracy to “conduct financial transactions . . . which involved the *proceeds* of [the] specified unlawful activity,” and Count 8, which alleged a conspiracy to “engage in a monetary transaction . . . in criminally derived property,” namely, the “deposit, withdrawal, transfer, and exchange of funds and monetary instruments, such property having been *derived from* [the] specified unlawful activity” (emphasis added). As charged, these two conspiracies focused on the funds obtained from Zencense’s *overall* operations, and so, unlike the other five charges, they are not similarly focused directly on the purchase of XLR-11. In support of these charges, the Government introduced evidence of domestic transactions involving Zencense’s revenues, and the Government expressly relied on both the drug trafficking and fraud predicates in urging the jury to convict on these counts. Despite that difference, we nonetheless conclude beyond a reasonable doubt that the “jury verdict” on these two counts “would have been the same absent” any *Yates* error. *Neder*, 527 U.S. at 19.

As noted earlier, the theory of mail fraud and wire fraud charged in the indictment was that Defendants made materially false representations about their products “to conceal that they then and there well knew that the ‘herbal incense,’ ‘potpourri,’ and ‘aromatherapy’ *was synthetic cannabinoid products for human consumption*” (emphasis

added). The Government’s fraud-based theory was thus explicitly intertwined with the drug-trafficking activity. Moreover, the jury here *did* properly convict Defendants on all of the drug-trafficking charges asserted under the CSA. Given these two key facts, we have no reasonable doubt that the jury’s verdict would have been the same had the jury understood that a conviction on Counts 2 and 8 could only be based on the charged drug-trafficking activity. Indeed, on this record, there is no reasonable possibility that the jury here rested its convictions on Counts 2 and 8 on a determination that Zencense’s ultimate revenues were derived *only* from mail fraud and wire fraud and *not* also from drug-trafficking. See *United States v. Jefferson*, 674 F.3d 332, 361 (4th Cir. 2012) (“[I]f the evidence that the jury ‘necessarily credited in order to convict the defendant under the instructions given . . . is such that the jury must have convicted the defendant on the legally adequate ground in addition to or instead of the legally inadequate ground, the conviction may be affirmed.’” (citation omitted)); see also *United States v. Reed*, 48 F.4th 1082, 1090 (9th Cir. 2022) (holding, in the context of a collateral challenge, that an instructional error in allowing a jury to base a conviction on alternative conspiracy predicates, one of which is legally invalid, is nonetheless harmless when the resulting alternative “conspiracies” are “inextricably intertwined” such that “no rational juror could have” convicted based on “one predicate but not the other” (citations omitted)).

Because any *Yates* error in allowing the money laundering convictions to be based on the mail fraud and wire fraud conduct was harmless beyond a reasonable doubt, we affirm Defendants’ money laundering convictions.

VI

Defendants' convictions on Counts 1–8 and 22–26 are affirmed. Defendants' convictions on counts 9–19 are reversed, and the district court is instructed to enter a judgment of acquittal on those counts. We remand to the district court for further proceedings consistent with this opinion.

AFFIRMED IN PART, REVERSED IN PART, AND REMANDED.